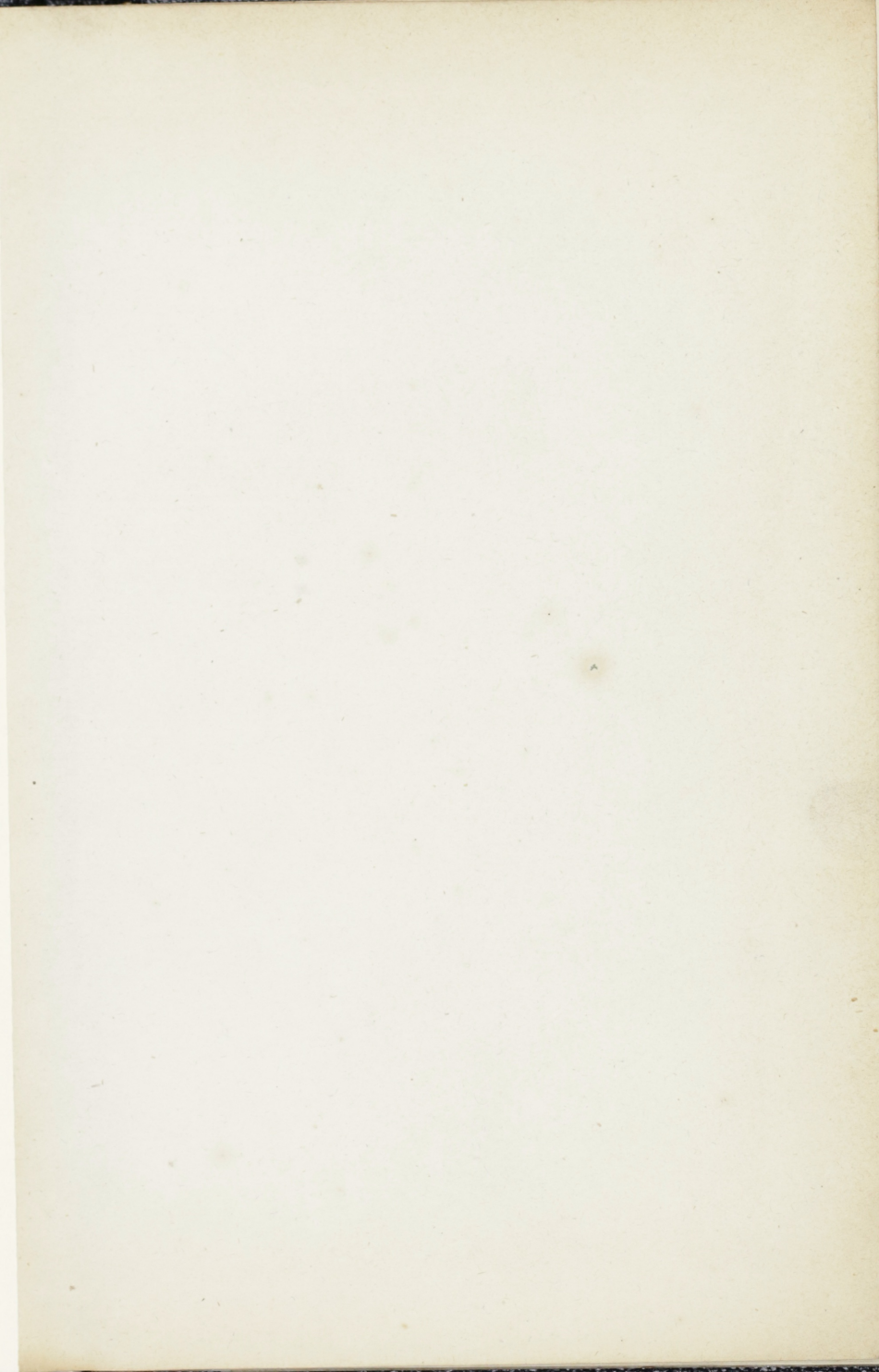
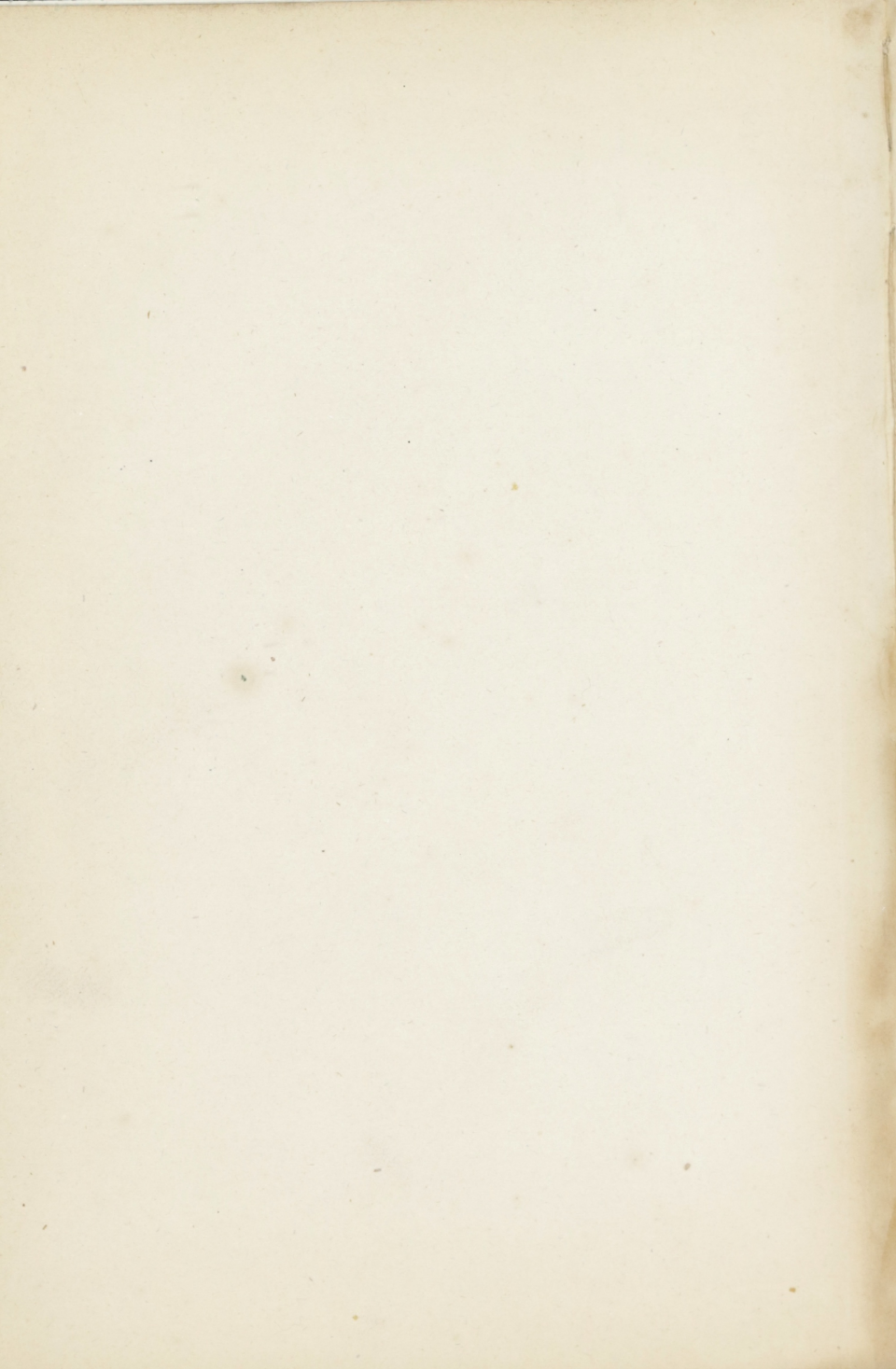
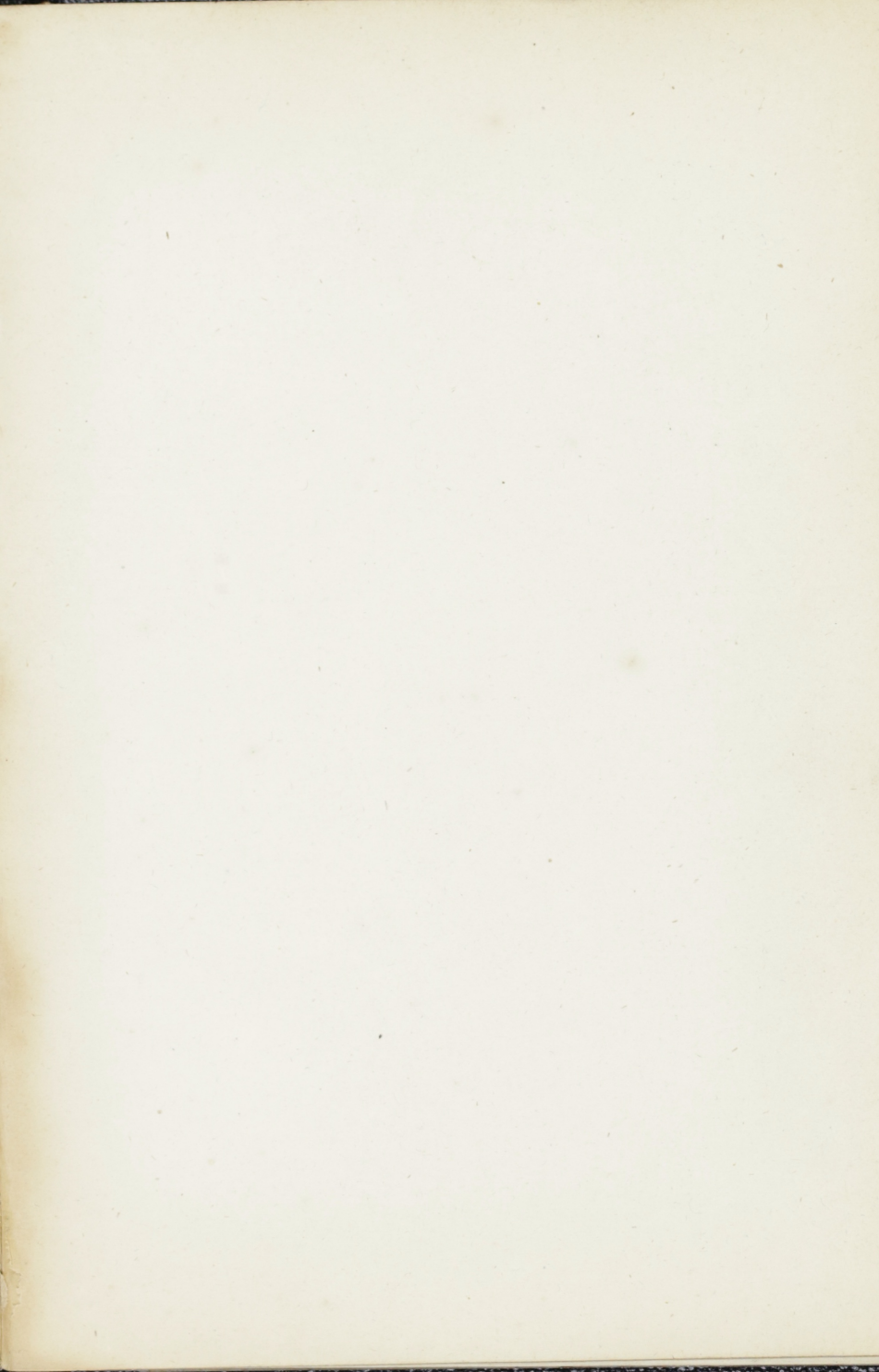


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BRITISH AND FOREIGN

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OF
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1853.

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S U R V E Y O R S.

The Surveyors at the following Ports are exclusively the Officers of the Society and are not permitted to engage in any other business or employment whatsoever.

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Belfast, with Dublin	Alexander Linton.
Bristol, with Chepstow, and the River	James Wood.
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	William Pope.
	George Winram.
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	Senhouse Martindale.
	Matthew Poppelwell.
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<i>Guernsey</i>	Peter Collas.
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<i>Londonderry</i>	James McGhee.
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<i>Ramsgate and Margate</i>	Edward Hodges.
<i>Scarborough, with Bridlington</i>	William Wear.
<i>Scilly Isles</i>	Hugh Tregarthen.
<i>Sligo</i>	William Pollexfen.
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LLOYD'S REGISTER

OF

BRITISH AND FOREIGN SHIPPING.

RULES AND REGULATIONS.

1. THE operations of the Societies of the two Register Books of Shipping formerly printed for the use of Merchants, Ship-Owners, and Underwriters, having ceased in the year 1834, this Society was then established for the purpose of obtaining a faithful and accurate Classification of the Mercantile Shipping of the United Kingdom, and of the Foreign Vessels trading thereto, and for the government of which the following Rules and Regulations have been from time to time adopted.

2. A Register Book to be printed annually for the use of Subscribers.

3. Each person subscribing the sum of Three Guineas per annum (or such other sum as the General Committee may fix), to be considered a Member of the Society, and entitled *for his own use* to one copy of the Register Book.

4. The subscription of Public Companies, or Public Establishments (not being engaged in Marine Insurance), to be Ten Guineas per Annum.

5. The subscription of Marine Insurance Companies to be regulated by the Committee on special application, in each case, but not to be less than Ten Guineas per Annum.

6. The Register Book to be periodically posted throughout the year.

7. For the convenience of Subscribers not resident in London, a Supplement, containing the additions to, and corrections made in, the Register Book, to be printed fortnightly in such convenient form, as to admit of its transmission by Post, so that such parties may be furnished, from time to time, with the latest and most complete information.

8. The superintendence of the affairs of the Society to be under the direction of a Committee in London, of twenty-four members, consisting

of an equal proportion of Merchants, Ship-Owners, and Underwriters. The Chairman for managing the affairs of Lloyd's, and the Chairman of the General Ship-Owners' Society, and also the Chairman and Deputy Chairman of the Liverpool Committee, and the Chairman of the Rotation Committees for the time being, to be, *ex officio*, Members of the Committee.

9. Six of the Members, namely, two of each of the constituent parts of the Committee, to go out annually by rotation, but to be eligible to be re-elected.

10. The vacancies so arising to be filled up by the election of two Underwriters and one Merchant by the Committee for managing the affairs of Lloyd's, and two Ship-Owners and one Merchant by the Committee of the General Ship-Owners' Society.

11. The Committee to appoint from their own body, annually, a Chairman and Deputy Chairman, and also a Chairman for a Sub-Committee of Classification.

12. The Committee to appoint a Sub-Committee of Classification, to be so regulated that each Member of the General Committee may, in rotation, take his turn of duty therein throughout the year.

13. The Secretary, Clerks, and Servants of the Society, and the Surveyors to be appointed by, and be under the direction of the General Committee.

14. Special meetings to be convened by order of the Chairman, or Deputy Chairman, or on the requisition of any three members.

15. All elections and appointments to be made by ballot.

16. No Member of the Committee to be permitted to be present on the decision of the classification of any ship of which he is the owner, or wherein he is directly or indirectly interested.

17. The Committee to be empowered to make such By-laws for their own government and proceedings as they may deem requisite, not being inconsistent with the original Rules and Regulations under which the Society was established; but no new Rule or By-law to be introduced, nor any Rule or By-law altered, without special notice being given for that purpose at the meeting of the Committee next preceding that at which such Motion is intended to be made; such notice to be inserted in the summons convening the meeting. No new Rule, or alteration in any existing Rule, materially affecting the classification of ships, to take effect until the expiration of six months from the time it shall have been determined upon.

18. All Reports of survey to be made in writing by the Surveyors according to the forms prescribed, and submitted for the consideration of the General Committee, or of the Sub-Committee of Classification; but the

character assigned by the latter to be subject to confirmation by the General Committee.

19. The reports of the Surveyors, and all documents and proceedings relating to the classification of ships, to be carefully preserved, and parties proving themselves to be interested therein, to have access to the same under the direction of the Chairman or Deputy Chairman.

20. Foreign ships, and ships built in the British possessions abroad where there is not a Surveyor (*See also Section 51*), to be surveyed on their arrival at a port in the United Kingdom; but a due regard is to be had to the circumstance of their having been exempted from the supervision while building to which all British ships are subjected, and the character to be assigned to them is to be regulated according to their intrinsic quality, and from the best information the Committee can obtain.

21. In every case in which the Character assigned to a ship may be proposed, on survey, to be reduced, notice is to be given in writing to the Owner, Master, or Agent, with an intimation that if the reduction be objected to, the Committee will be ready to direct a special survey, on the Owner, Master, or Agent, agreeing to pay the expenses attending the same, provided on the said survey there shall appear sufficient ground for the proposed reduction.

22. When the Surveyors consider Repairs to be requisite, they are respectfully to communicate the same in writing to the Owner, Master, or Agent, and if such repairs be not entered upon within a reasonable time, a corresponding report is to be made to the Committee for their decision thereon.

23. Parties considering the repairs suggested by the Surveyor to be unnecessary or unreasonable, may appeal to the Committee, who will direct a special survey to be held; but should the opinion of the Surveyor be confirmed by the Committee, then the expense of such special survey is to be paid by the party appealing.

24. The Surveyors to the Society not to be permitted (without the especial sanction of the Committee), to receive any Fee, gratuity, or reward whatsoever for their own use or benefit, for any service performed by them in their capacity of Surveyors to this Society, on pain of immediate dismissal.

25. The Surveyors will be directed to attend on Special Surveys of ships under damage, or repairs for Restoration, when required by merchants, Ship-Owners, or Underwriters; the charge for which is to be regulated according to the nature and extent of the service performed. In all cases, the application for the assistance of the Surveyors must be made in writing addressed to the Secretary.

FUNDS.

26. The Funds to be under the authority and control of the Committee, and a statement of the Receipts and Expenditure to be annually printed for the information of the subscribers.

27. The following Fees to be charged to the Owners of ships prior to their vessels being classed and registered in the book.

I.

For Entering and Classing Ships, and for Entering and Classing Ships surveyed for Continuation, or repaired for Restoration.

For each Ship ...	...	under	100 Tons ...	£1 0 0
Ditto ...	of 100 Tons and under	200 ...	2 0 0	
Ditto ...	200 —	300 ...	3 0 0	
Ditto ...	300 —	400 ...	4 0 0	
Ditto ...	400 and upwards ...	... ...	5 0 0	

II.

For Registering Repairs ; or change of Owners.

For each Ship ...	...	under	150 Tons ...	£0 10 0
Ditto ...	of 150 Tons and under	300 ...	1 0 0	
Ditto ...	300 —	500 ...	2 0 0	
Ditto ...	500 and upwards ...	... ...	3 0 0	

III.

For Re-classing Ships (except when repaired) the Characters of which have been expunged.

For each Ship ...	...	under	200 Tons	£0 10 0
Ditto			200 and above	1 0 0

Special Surveys.

23. For Special Surveys, and where the Surveyors to the Society are required by the Owners to superintend the building of ships, or repairs for Restoration, or otherwise, a charge will be made according to the nature and extent of the service performed. In all such cases the authority of the Committee is required.

29. Certificates of Character, of the Form No. 7, signed by the Chairman of the General Committee, or by the Chairman of the Sub-Committee of Classification, and countersigned by the Secretary, will be granted on application ; the charge for which will be as follows :—

For Ships under 200 Tons	...	...	...	5s. each.
Ditto of 200 — and above	..	...	...	10s. each.
30. Rules, each copy	...	...	...	2s. 6d.

CHARACTERS.

31. The Characters to be assigned to ships to be, as nearly as possible, a correct indication of their real and intrinsic qualities, and to be in all cases fixed (not by the Surveyors, but) by the Committee, after due consideration of the Reports of the Surveyors and such other documents as may be submitted to them, and will be distinguished as follows:—

SHIPS A

To consist of new ships, or ships Continued, or Restored. *Vide Sections 34, 54, 55, 57.*

SHIPS Æ asterisk, in Red,

To consist of ships that have passed the period assigned on the original survey, or Continuation, or Restoration; and also of ships not having had an original character, and which are found on survey of superior description, fit for the conveyance of dry and perishable goods, *to and from all parts of the world.* *Vide Section 60.*

SHIPS Æ, in Black,

To consist of ships which are found on survey fit for the safe conveyance of dry and perishable goods on *shorter voyages.* *Vide Section 61.*

SHIPS E

Will comprise all ships which shall be found on Survey fit for the conveyance of cargoes not in their nature subject to sea damage *on any voyage.* *Vide Section 64.*

SHIPS I

To consist of ships fit to carry cargoes not liable to sea damage *on shorter voyages.* *Vide Section 66.*

32. In all cases in which the application of the rules must necessarily be regulated by the ship's admeasurement, the *least* tonnage (whether the result of the old or new method) is to be adopted.

RULES FOR CLASSIFICATION.

SHIPS A

33. Will consist of new ships and those which have not passed a prescribed age,* provided they are kept in a state of complete repair and efficiency. The character A will not, however, be granted to any vessel, unless satisfactory evidence of the date of build and place where built is produced.

* See the Tables of Timbering, &c. Nos. 1, 2, and 3.

34. The number of years to be assigned for this Character to be determined with reference to the original construction and quality of the vessels, the materials employed, and the mode of building; and their continuance for the time so assigned to depend upon its being shown by occasional surveys (annually if practicable) that their efficiency is duly maintained. The characters of ships A will be struck out of the Register, unless re-surveyed within a period of four years from the *date of last survey*,—or, in the case of ships exceeding the eight years' grade, within *one-half of the time* originally assigned. After the expiration of the periods prescribed, ships will be permitted to Continue in the character A, or may be Restored thereto, for a further limited period, on complying with the conditions hereinafter prescribed in Sections 54, 55, and 57.

35. New ships are to be surveyed while building, by the Surveyors to this Society, in the following three stages of their progress, or they will be liable to lose one year of the period to which they might otherwise be entitled. (*See Section 53.*)

First.—When the Frame is completed.

Second.—When the Beams are put in, but before the Decks are laid, and with at least two strakes of the plank of the ceiling between the lower deck and the bilge unwrought, to admit of an examination of the inner surface of the plank of the bottom.

Third.—When completed, and before the plank be painted or payed.

All Ships for which a higher character than Ten Years' A may be claimed, must undergo a Survey by a Surveyor who is an exclusive Officer of the Society, twice, at least, while building; namely, at the first and at the second stages of their progress as above prescribed. Due notice must be given by the Builder or Owner of their being ready for this additional survey.

36. A full statement, agreeably to Form No. 4, of the dimensions, scantlings, &c. of all new ships, verified by the builder, is to be transmitted by the Surveyor, and to be kept as a record in the office of the Society.

RULES TO BE OBSERVED IN BUILDING SHIPS.

37. The whole of the Timber to be of good quality, of the descriptions hereinafter shown in a Tabular Form, No. 1, as applicable to the several terms of years for which ships so constructed may respectively be appointed to remain on the character A: the stem, stern post, beams, transoms, apron, knightheads, hawse timbers, and kelson of ships claiming to stand *twelve years*, to be entirely free from all defects; the

frame to be well squared from the first foothook heads upwards and free from sap, and likewise below, unless the timber be proportionably larger than the scantling hereafter described; every alternate set of timbers to be framed and bolted together to the gunwale. The butts of the timbers to be close, and not to be less in thickness than one-third of the entire moulding at that place, and to be well chocked with a butt at each end of the chock. In all cases in which the heads and heels of the timbers shall be *square*, in vessels intended for the twelve years' grade, a dowel (to be in diameter from one-fourth to one-third of the moulding of the timber) must be introduced into the ends of such timbers in order to connect them together. In the construction of poops and top-gallant forecastles the timbers must be of the same materials as are required by the Rules (Table No. 1) for the "Top-timbers" of the frames of ships, according to the several terms of years appointed for such ships to remain on the character A. The outside planking of the forecastle and the sheerstrakes, plank-sheers, shelf or clamp, and spirketting of poops and top-gallant forecastles must be likewise of the materials required by the Rules (Table No. 2) for the "Topsides" of the said ships, *admitting also mahogany*. The remainder of the planking of the poops and top-gallant forecastles may be of fir of good quality. The beams of top-gallant forecastles and the mast beams, breast beam, and transom beam of poops, must be of the material required by the Rules (Table No. 1) for the beams of the said ships. The remainder of the beams and the water-ways of the poop may be of cedar, mahogany, Baltic fir, red pine, pitch pine, larch, hackmatac, tamarac, juniper, or cowdie; *and rock elm, for such beams only*, in ships of the 7 A grade and upwards, and of yellow pine or American white spruce in all below that grade. This Rule does not apply to raised quarter decks.

38. The Scantlings of the timbers, keelson, keel, planking, &c. are not to be less than those shown in the Table annexed to the Rules, following page 28.

39. The intermediate dimensions for the scantling of timbers between the floor heads and the gunwale to be regulated in proportion to the distance from the two points. Should the room and space be increased, the siding of the timbers to be increased in proportion. Whenever ships are built with double floors, *thick strakes must be worked inside, to extend from the lower part of the short floor head chocks to the upper part of the long floor head chocks*, and be well bolted through and clenched.

40. The sizes of the deck and hold Beams have been regulated so as to be determined by the length of the beams *amidships*, as shewn in the Table, following page 28. The beams will be required to be of the

size of the midship beam, except those at the *after end* of the ship, which may be reduced in proportion to their length. If beams of spruce or yellow pine are used, the siding of such beams shall be one-fourth larger than is prescribed by the above Table, or be increased each way, siding and moulding, equal in area to that amount.

41. The deck and hold Beams to be sufficient in number, and securely fastened to the sides either with lodging knees of iron or wood, or with shelf pieces; or with a shelf piece and knees: or with some other security equal thereto, so as sufficiently to connect the ends of the beams to the sides of the ship: and, in addition, all ships of 150 tons and above to have vertical knees to the Deck beams; and those of 200 tons and above to have vertical knees to the Hold beams (fitted as standards or hanging knees, the latter being preferred), in number as shewn in the table following page 28. Vessels of 13 feet, and under 15 feet hold, the spacing of the hold beams not to exceed 8 feet apart, and the deck beams 4 feet:—Vessels of 15 feet and under 18 feet hold, the spacing not to exceed 8 feet and 4 feet apart alternately, or in that proportion; the deck beams to be placed one over every hold beam, and one in all double spaces:—Vessels of 18 feet hold and above, the spacing of the beams not to exceed 4 feet 6 inches; the deck beams to be one over every hold beam. The depth in all such cases to be determined by taking the measure from the top of the limber-strake to the top of the upper deck beams. Ships having a depth of hold, measured from the limber-strake to the under side of the lower deck beam, *above* thirteen feet but not exceeding fifteen feet, must be secured with iron riders, in number and description such as are prescribed by the Rules, section 62, or by orlop beams, sufficient in number and properly secured. *All ships exceeding twenty-three feet in depth from the top of the limber-strake to the under side of the upper or main deck*, will be required to have orlop beams; the number to be in no case less than one-half of the number of lower deck beams in the space between the fore-mast and the mizen-mast. The application of this rule to Colonial and Fir built ships will not exempt them from the full operation of the Rules, section 62. Every ship exceeding 150 tons to have at least one crutch for the security of the heels of the after-timbers of the frame; one pair of pointers in addition to a knee at each end of the wing transom to connect the stern frame with the after-body of the ship; and a transom over the heels of the stern timbers properly kneed. The heels of the cant timbers forward and aft to be stepped into or on the deadwood, and bolted through.

42. Shifts of timber in ships of 200 tons and upwards, to be not less than

one-seventh of the main breadth; and in ships under 200 tons, to be not less than one-sixth of the main breadth.

PLANK.

43. The outside planking to be of good quality, of the description prescribed in the Tabular Form, No. 2, and to be clear of sap and free from all defects.

44. The inside planking to be of the description shown in the Tabular Form, No. 3, and free from all foxy, druxy, or decayed planks. With regard to the ceiling plank, and the efficiency of its fastening, it will be required that the planking shall be properly shifted and fastened so that there shall be at least either treenails or through bolts, or short bolts, in each plank of the ceiling *in every timber*.

45. No butts to be nearer than five feet to each other, unless there be a strake wrought between them, and then a distance of four feet will be allowed; and no butts to be on the same timber, unless there be three strakes between, as more particularly shown in the diagram annexed (*see Plate No. 2*); but vessels under 200 tons will be exempted from the full operation of this rule; and in ships of larger tonnage a literal compliance with it will be dispensed with in cases wherein it may be satisfactorily proved that the departure from the rule is only partial, being confined to the ends of the ship, or the planking of the topside, and does not injuriously affect the ship's general strength; but such relaxation will not be sanctioned unless an accurate description of the shifting of the plank be transmitted by the Surveyors, to enable the Committee to form a proper judgment on the case.

The thickness of the plank, according to the tonnage of the ship, is not in any instance to be less than is prescribed in the Table of Scantlings following page 28.

FASTENINGS.

46. The Treenails to be of good quality, and of a description of wood EQUAL TO THE BEST MATERIAL through which they are to pass. They are to be circular, being either engine-turned, compressed, or planed. In all cases in which planks above twelve inches in width shall be used, they must be *double fastened*; and those above nine inches in width must be treenailed double and single except bolts intervene; and if less than that width, then to be treenailed single, and at least one-half of the treenails must go through the ceiling. All ships to be fastened with at least one bolt in every butt, and from the wales to the lower part of the bilges the bolt to be through and clenched. The bilges to be secured with bolts so placed that from the foremast to the mainmast in ships under 300 tons there shall be at least one bolt through and clenched in each first foothook; and that in ships of 300 tons and

upwards there shall be at least two bolts through and clenched for each set of timbers in one or other of the thick bilge strakes. All the bolts of the knees, breasthooks, crutches, riders, transoms, pointers, kelsons, shelf pieces, and of all other material fastenings, are to be driven through and clenched on rings of the same metal as the bolts. The up and down bolts in the knees to beams are not required to be through the deck, but whether clenched upon the beams, or upon the deck, they must be clenched on rings of the same metal as the bolts. The two bolts, the nearest to the crowns of the pintles and braces of the rudder are also to be through and clenched, those through the braces to be in the main piece of stern post. The limber strakes on each side to be bolted down to the floors, and one bolt in every floor to be through and clenched. When the heels of the first futtocks (either with full moulding or with chocks) meet at the middle line on the keel under the kelson, the through bolting of the limber strakes may be dispensed with. Ships otherwise entitled by THEIR MATERIALS to stand higher than the TEN YEARS' grade, in which the whole of the outside fastenings above the floor heads, including those of the flat of the upper deck, shall consist of copper or mixed metal to the entire exclusion of iron bolts, nails, and treenails, and in which no iron bolts are used below the floor heads, shall be allowed an additional period of Two Years. And Ships otherwise entitled by THEIR MATERIALS to stand higher than the TEN YEARS' grade, in which treenails may be used in fastening the plank, but in which all the bolts,* and also nails of the flat of the upper deck, shall be of copper or mixed metal, to the entire exclusion of iron, shall be allowed an additional period of One Year. In all such cases of substitution, the number of bolts must be the same as is already prescribed as above for treenails; the proportion of through bolts must be at least *one-half*†; and all the through bolts must be of malleable metal, and clenched on rings (of the same metal) inside. The sizes of the copper or mixed metal bolts must be as under, viz.

In ships of 150 tons and under 200 tons	...	...	...	3/4 in.
200 ditto 350	...	...	...	4/8 in.
350 ditto 500	...	...	...	1 1/8 in.
500 ditto 700	...	...	...	3/4 in.
700 ditto 900	...	...	...	1 1/8 in.
900 and above	...	...	...	1 in.

Smaller sizes must not be used.

* It is not intended that this rule should apply to the bolts or fastenings which are incidental to the rigging; nor to the bolts of the comings, wind-ss bitts, rails, bowsprit bitts, deck fixtures, or any fastening above the plank-sheer of the waist, or of poop, or top-gallant forecastle, which may be of iron. The fastenings of the cutwater, quarter pieces, and bowsprit hook in vessels claiming to stand thirteen years, and upwards, to be copper or mixed metal, as heretofore.

† Whenever metal fastenings are used in lieu of Treenails, this proportion must be observed.

and the lengths of the short bolts not less than as follows, viz.—

When used in plank of $2\frac{1}{2}$ inches, to be 7 inches long

—	3	”	8	”
—	4	”	10	”
—	5	”	12	”

and so on in proportion for plank of other thicknesses. The sizes of the bolts required in the several parts must not be less than is shown in the Table following page 28.

47. In every case where the butt and bilge Bolts are not through and clenched, One Year will be deducted from the period which would otherwise be assigned in the classification of the vessel.

48. The Scantlings and dimensions for all sized vessels to be proportionately regulated, agreeably to a scale and Table adopted by the Society, a copy of which is in the hands of each of the Surveyors. See *Plate No. 1*, and Table following page 28.

49. Ships surveyed while building, in which *all the materials required for a Twelve Years' Ship shall have been used*, and most of the other requisites for that grade fulfilled, but which, from partial deficiencies, may not appear to be in all respects entitled to the full period, although superior to the description of a Ten Years' ship, may be marked in the Book thus, 11 A ; thereby denoting that they are to remain on that grade *Eleven Years*, provided they be kept in a state of efficient repair.

50. Ships surveyed while building, in which the scantling and shifts of the timbers, the thickness and shifts of the planks, and size of fastenings may be the same as are required by the rules, and in which the description of materials prescribed in the annexed Tables shall also have been used, but in which the *alternate* sets of timbers shall not have been framed, nor the chocks wrought with a butt at each end, nor the frame so well squared as is required for Twelve Years' ships, but which shall be *in other respects* equal thereto, shall be marked “10 A ;” thereby denoting that they are to remain on that grade for *Ten Years*, provided they be kept in a state of efficient repair.

51. In all other cases, ships surveyed while building, and constructed of the materials of good quality, hereinafter shown in the Tables Nos. 1, 2, and 3, will be allowed the several terms of years respectively appointed, provided they be kept in a state of efficient repair. All ships, *not built under Survey*, whether in the United Kingdom or abroad for which a character may be claimed, must be placed in dry dock

or laid on blocks in order that their bottoms may be seen and properly examined; they will also be required to have *their timbers completely exposed for examination, by a listing or plank being taken out* (if not originally left open) all fore and aft at the first foothook heads, and another between decks; *and a few tree-nails must likewise be driven out*, so that the Surveyors, from actual inspection, may be satisfied whether or not they are of the quality and make prescribed by the Rules; and the same being thus ascertained, shall be reported to the Committee, and a character assigned. If of 400 tons and upwards, the Survey must be made by two Surveyors, and their report signed accordingly.

52. Ships built under a Roof, *which shall project at each end beyond the length, and on each side beyond the breadth, a quantity equal to half the breadth of the vessel*, shall have one year added to the period prescribed, provided they shall have been surveyed whilst building, and shall have occupied a period of not less than twelve months in their construction, *and not less than nine months (as part thereof) after the Frames shall have been completed.*

53. Ships built in the United Kingdom, or in Quebec after 1851, or St. John New Brunswick after 1853, and *not surveyed while building* by the Surveyors to this Society, or where the owners or builders may have refused to permit them to survey and examine the same at the several periods prescribed by the Rules, will be subjected to the minutest possible examination previously to assigning a character; but in all such cases One Year will be deducted from the period which would otherwise have been assigned, in consequence of their not having been submitted to such survey during their construction. In no case, however, will a higher grade than 10 A be assigned to ships built in the United Kingdom, which shall not have been surveyed while building.

CONTINUATION OF SHIPS A.

54. If, on the termination of the period of original designation, or if at any subsequent period not exceeding one-third of the number of Years assigned originally, or on Restoration, an Owner should wish to have his ship remain, or be replaced on the letter A (*vide section 59*), he is to send a written notice thereof to the Secretary, and the Committee shall then direct a Special Survey as follows to be held, consisting of not less than *two* competent persons to be appointed by the Committee, one of whom shall be a Surveyor the exclusive servant of the Society, namely,

SURVEY.

For the purpose of facilitating such survey, the ship shall be either placed in dry dock or laid on blocks, so that the keel may be examined, and be scraped from the light water-mark upwards, including the plank-sheer and waterways, so as to expose the surface of the plank to view.* The hold to be cleared and proper stages made. The attention of the Surveyors shall then be particularly directed to the state of the *upper or main deck* and comings, the upper and lower deck bolts, and the outside planks through which they pass, the *plank-sheers*, waterways, and beams, so far as they can be examined; the hawse timbers, knight-heads, breasthooks, and-transoms; the floors and kelsons; the keel and rudder; the planking outside, *and the treenails passing through* from the light water-mark upwards; the ceiling inside, and the frame and inner surface of the outside planking where it may be seen; and the sheer and general form of the ship; *and should any suspicious treenails or bolts appear, the same are to be driven out for inspection.* The Surveyors on these points shall transmit to the Committee a detailed report, accompanied by such observations as may occur to them, from inspection of the ship, or from information of the repairs she may have received. If from the report of such special survey the ship shall appear to be in a sound and efficient state, and to have preserved her original form unaltered, the Committee shall continue such ship on the letter A for such further period as they may think fit, not exceeding, however, one-third of the number of years which had been originally assigned. Ships so Continued shall be distinguished in the Register Book by the number of years for which the character is extended, being inserted separately under the number assigned on the original character, thereby denoting that the ship has been found on survey in such good and efficient order as to entitle her to be Continued for years. Ships built in the Colonies, which shall have had the character A for four years, will be allowed a Continuation for *Two Years*, provided that, in addition to the above requisitions, and those prescribed by section 63, the Owners shall agree to a *strake in the Topsides, fore and aft*, on both sides, being also removed, and the ships, specially surveyed in that state, shall be found to be in a sound and efficient condition. The period assigned for Continuation will, upon all occasions, commence from the time the ship may have gone off the letter A, without regard to the date when the survey for this purpose may have been held.

* If the ship has been recently coppered, and it shall appear to the Surveyors that stripping from the light water mark to the wales may be dispensed with, the case will receive due consideration upon application to the Committee by the owner in writing.

In cases of the repair of ships for Continuation of character under the Rules, section 54, (*but in no other*) materials of an inferior description (but not below those prescribed for the six years' grade) may be permitted to be used in those parts which must of necessity, under the operation of the Rules, section 56, be *entirely removed* on a repair for Restoration; subject, however, to the ship-owner, in every instance, making a special application to the Committee for their previous sanction.

RESTORATION OF SHIPS TO THE CHARACTER A.

FIRST RULE.

55. If, at any time before the expiration of two-thirds of the number of years *beyond* the period originally assigned, an owner be desirous to have his ship Restored to the A character, such Restoration (on his consenting to the special survey hereinafter described, to be held by two Surveyors, and performing the repairs found requisite) will be granted for a period not exceeding two-thirds of the time originally assigned, the same to be calculated from the date of such repairs.

Requisites for Restoration.

56. All the bolts in the range of each deck to be driven out, and the planks taken out; the upper deck waterways, and planksheers and spirketting, and the strake next the waterways on the lower deck in the midships, to be taken out; the sheathing to be entirely stripped off the bottom; *all the outside planking from the light water-mark upwards, to be scraped bright*; a strake in the upper course of the bottom, between the wales and the light water-mark fore and aft, and a plank in the ceiling at the floor heads on each side, to be taken out, the limbers to be clear, and the hooks forward to be exposed; and in that state the ship to be submitted to a special survey and examination, at which the attention of the Surveyors appointed by this Society is to be particularly directed to the state of the decks, the remaining plank of the topsides, the wales, upper courses, and treenails, and other fastenings; also to the state of the frame, hawse timbers, and knightheads, kelson, floors, foothooks, ceiling, and breasthooks, the rudder in all its parts and hangings; and if, after such examination, the Owner should consent to take out all planks, timbers, beams, knees, waterways, fastenings, and other parts that may be found defective, or objected to, and replace them with materials of the same species, or of equal quality

with those of which the ship was originally constructed, such ships to be entitled to Restoration for a period proportionate to their real condition and the extent of the repairs performed ; or if timber of an inferior description, or second-hand English or African Oak or Teak be used, then for a period not exceeding that for which such materials would have entitled a new ship to stand A according to the tables, subject in either case to the ship being at all times thereafter kept in a state of efficient repair.

SECOND RULE.

57. If, at any age of a vessel, an Owner be desirous to have his ship Restored, such Restoration (on his consenting to the special survey herein-after described, to be held by two Surveyors, and performing the repairs thereby found requisite) will be granted for so long a period as may be deemed expedient by the Committee, not exceeding, in any case, the term of eight years.

Requisites for Restoration.

58. The whole of the outside plank of the vessel to be taken off as low as the second foothook heads, and the remainder of the planking, either outside or inside, together with all the decks, to be removed, *so as to expose the timbers of the frame entirely to view*, and in that state the ship to be submitted to a special survey and examination, by the Surveyors appointed by this Society ; and if, after such examination all timbers, beams, knees, kelsons, transoms, breasthooks, remaining plank, inside or outside, or other parts found to be defective, be replaced with materials of the same species, or of equal quality with those of which the ship was originally constructed, and all the treenails driven out and renewed, such ship may be Restored. But if timber of an inferior description, or second-hand English or African Oak or Teak be used, then for a period not exceeding that for which such materials would have entitled a new ship to stand A according to the tables, subject, in either case, to the ship being at all times thereafter kept in a state of efficient repair.

59. Ships which have been *Restored* shall be entitled to Continuation, subject to the same conditions of survey and examination as are prescribed for ships proposed to be Continued, at the expiration of the period first assigned to them (Sec. 54) ; but in like manner, the term of such extended Continuance shall be limited to a period not exceeding one-third of the number of years for which the ships may respectively have been *Restored*, without any reference whatever to the period originally assigned to them. At the termination of the several periods assigned to ships for remaining

on the character A, they will be reduced to the Description designated by the diphthong *Æ*; but if during the *last year* of the period assigned to them, the Owners of a ship shall, in consequence of her being about to proceed on a distant foreign voyage, apply to have her surveyed for continuation on the letter A, or for the diphthong *Æ* with the Asterisk, a special survey shall be held conformably to the Rules, sections 54 or 60, as the case may be: and if from the report of such special survey, the ship shall appear to be in all respects in a sound and efficient state, such as is required by those Rules, the Committee shall, from the period at which the ship's character would terminate, continue her on the letter A, or assign to her the character **Æ* (in red) in accordance with the Rules referred to.

SHIPS *Æ* ASTERISK, IN RED,

60. Will consist of all ships that have passed the periods which have or might have been assigned to them for the character A, or for Continuation, or for Restoration, and shall be found on survey to be of superior description, being fit for the conveyance of dry and perishable goods to and from all parts of the world, shall be distinguished by inserting their characters in Red with an asterisk thus prefixed, **Æ*.—But in all cases in which the owner may claim this distinction, the ship must undergo a special survey by two surveyors, to be appointed in every instance by the Committee, and be subject in other respects to a compliance with the undermentioned requisitions of

SURVEY.

The ship to be either placed in dry dock or laid on blocks, so that the keel may be examined, and be scraped from the light water-mark upwards, including the planksheer and waterways, so as to expose the surface of the plank to view.* The hold to be cleared, and proper stages made both inside and outside. The attention of the surveyors shall then be particularly directed to the state of the upper or main deck and comings, the upper and lower deck bolts, and the outside planks through which they pass, the planksheers, waterways, and beams, so far as they can be examined; the hawse timbers, knightheads, breasthooks, and transoms; the floors and kelsons; the keel and rudder; the planking outside, and the treenails passing through from the light water mark upwards; the ceiling inside,

* If the ship has been recently coppered, and it shall appear to the Surveyors that stripping from the light water mark to the wales may be dispensed with, the case will receive due consideration upon application to the Committee by the owner in writing.

and the frame and inner surface of the outside planking where it may be seen; and the sheer and general form of the ship; and should any suspicious treenails or bolts appear, the same are to be driven out for inspection.

And to entitle them to continue this character, such vessels will be required, in addition to the usual annual survey, to undergo a special re-survey, as prescribed above, within a period (from the date of the last special re-survey) not exceeding *two-thirds* of the several terms of years originally assigned to them, or earlier, if in the judgment of the Surveyors, upon a careful examination of the ship, the same shall appear to them to be necessary. With respect to the materials to be used in the repair of vessels, the Owners of which may apply for a Special Survey for the *Asterisk*, not any will be permitted of a description inferior to the materials contained in the *Tables for Vessels of the Six Years' grade*, or to those prescribed by the *Tables for New Ships* of higher character, for periods equal to two-thirds of the several terms of years of original designation of the ships undergoing repair.—Those ships, however, the original construction of which may not have entitled them to the A character for a longer period than Five Years, will not be allowed the distinction of the asterisk. Whenever it shall appear to the Surveyors that a vessel classed *Æ with the asterisk* shall no longer be in a condition to deserve that distinction, notice of the proposal to reduce her shall be given *in writing* to the Owner, Master, or Agent, in the same manner as is prescribed by the rules, section 21, page 7.

SHIPS Æ, IN BLACK,

61. Will consist of ships that have passed the prescribed age for the A Character, but have not undergone the repairs which would have entitled them to be Continued or Restored; or having been Continued or Restored, and the additional period thus assigned expired, and of ships of the Æ asterisk Character, in Red, and also such ships as have never had an original character, which shall be found on survey fit for the conveyance of dry and perishable goods on *shorter voyages*, shall be distinguished by the diphthong Æ in Black; and a careful survey will be required to be made *annually*, or on the return of the ship from every foreign voyage, by one of the Surveyors to this Society, who is to state distinctly and separately the actual condition of the *upper deck fastenings, waterways, spirketting, planksheers, topsides, upper deck with its appendages, lower deck fastenings, wales, counter, plank, and treenails outside to the water's edge, rudder, windlass and capstan, beams, breasthooks, transoms, and timbers*; but

if not surveyed within twelve months, such ship having been during that time in some port in the United Kingdom, the character will be omitted until such survey be held; or, as the case may be, she will be allowed to pass into the class E.

BRITISH NORTH-AMERICAN BUILT SHIPS, AND FIR SHIPS.

62. Ships built in the British North-American Colonies, and all ships wherever built, the frames of which are composed of *Fir*, of 300 tons and above, shall, in order to entitle them to be classed in the Register Book of the Society, be secured in their bilges by the application of iron riders to cover the joints of the floor and foothook heads, to extend from the height of the hold beams to the floors so as to receive not less than two bolts in a substantial part of the floors; the number of iron riders to be not less than one on every fourth floor on each side from two feet abaft the mainmast to two feet abaft the foremast, the size thereof to be not less than $3\frac{1}{2}$ inches by $1\frac{1}{2}$ inches at the joints of the timbers for ships of from 300 to 400 tons, and to be increased *one quarter of an inch each way*, for every one hundred tons of increased size. That all such ships shall also be secured by iron hanging knees to the hold beams, one knee to every alternate hold beam, provided the distance of the said beams from each other does not exceed 4 feet 6 inches, and the tonnage be less than 400 tons; but if the distance exceeds 4 feet 6 inches, or the ship is 400 tons and above, then one to every hold beam. The knees to be connected with the riders or not, at the option or convenience of the owners; but if not so connected, the side arms are to be long enough to receive at least four bolts; the whole to be securely bolted with bolts of sufficient size. In cases of refusal, the words "not fastened as per rule, section 62," will be inserted against the vessels' names. All ships built in the Colonies will be considered as "iron fastened" in their centre lines, unless it shall be satisfactorily shewn to the contrary, either by the exposure of some of the bolts, or by a certificate to be produced from the builders.

63. All British North-American built ships, which have gone, or may go off the List of Ships of the A character, or which may be of an age exceeding the period for which they might have had claims to be put upon that grade (whether classed or not), shall, as from time to time they come under examination, be subjected to a careful survey, to be made by one of the Surveyors to this Society;—and no further character shall be assigned them unless a survey shall be held as follows; and planking, either inside or outside, at the discretion of the Surveyors, in quantity equal to *one entire*

strake fore and aft on both sides, shall be removed; to be taken out in midships immediately above the turn of the bilge, and *at such height* forward and aft as may, in their judgment, best expose the timbers of the frame to view; that a special report of the state of these timbers, and of the general state and condition of the upper deck fastenings, waterways, spirketting, planksheers, topsides, upper deck with its appendages, lower deck fastenings, wales, counter, plank and treenails outside to the water's edge, rudder, windlass and capstan, beams and breasthooks, shall be transmitted by the Surveyors to the Committee; and on the receipt of such report the character shall be assigned. If the diphthong character be then assigned, it shall be continued (subject to an annual survey) for a period not exceeding the number of years originally assigned; at the expiration of which the character will be discontinued, unless a similar survey and examination of the frame be again submitted to.

SHIPS E,

64. Will comprise all ships which shall be found on survey fit for the conveyance of cargoes not in their nature subject to sea damage *on any voyage*.

65. Subject to occasional inspection, at least once in every two years, ships will continue in this class so long as their condition shall, in the opinion of the Committee, entitle them thereto.

SHIPS I,

66. Will comprise ships which shall be found on survey fit for the conveyance, *on shorter voyages* (not out of Europe), of cargoes in their nature not subject to sea-damage.

67. The Bottom of every ship is to be CAULKED once in every five years, unless wood-sheathed and felted, and then once in every seven years, except in the case of *Teak-built ships*, upon which a special survey may have been requested, and the Surveyors having ascertained, by the removal of a strake of sheathing fore and aft under the wales, and a strake at the first foothook heads, and by causing listings to be cut out at the wood's ends, that such caulking is not required, the same may then be dispensed with. If any ship shall be stripped within the periods above mentioned, her bottom is to be caulked, *if necessary*.

68. In all cases in which ships may be Doubled, doubling of not less than the thicknesses hereinafter mentioned will be required, the same to be pro-

perly wrought and fastened as follows : in every instance the doubling is to be at least single fastened either with treenails or with bolts, and a through bolt in every butt. If treenails be used, every treenail must, if practicable, be a through fastening; and if bolts be used, then one-sixth of them from the lower part of the bilge upwards must be through and clenched on the ceiling in addition to the butt bolts.

The throat bolts of iron Knees, and the bolts of iron Hooks, Crutches, and Pointers, must be renewed through the doubling.

The thickness of the doubling for the wales and bottom, on ships

Under 400 tons to be not less than	...	2 inches
of 400 „ and under 600 tons	...	2½ „
of 600 „ and above	...	3 „

On the Topsides of ships not exceeding 300 tons, the thickness may be 1½ inches.

No ship hereafter doubled, shall be entitled to the asterisk or any higher class, unless it shall be ascertained at the time of doubling that the frame is capable of securely retaining the fastenings.

IRON-FASTENED SHIPS.

69. All ships although iron-fastened (except as hereinafter mentioned) shall be classed in the same manner as copper-fastened ships, so long as they remain unsheathed with copper, provided they are, in all other respects, constructed in accordance with the Rules; but when sheathed with copper over the iron fastenings, the words “Coppered over Iron Bolts” shall be added to the character in the Register Book, and continued until the ship be thoroughly copper-fastened.

70. Ships built in India, although fastened with iron, shall be permitted to be copper-sheathed without any mark being placed in the Book, provided the bottom be felted or chunamed, and wood-sheathed, and subjected to a careful examination of the iron fastenings on every occasion on which the sheathing is stripped off, for which purpose some of the bolts and nails are to be taken out of the lower part of the bottom, and to be seen by the Surveyor; but no such ship shall be permitted to continue either on the A or on the *Æ in red class for a longer period than one-half the number of years beyond the term originally assigned for her remaining on the A character, unless the bottom shall have been doubled, or the whole of the iron fastenings taken out or properly secured, and the bottom refastened with bolts, or treenails, or both, including the middle line and breasthook and crutch bolts.

ANCHORS, CABLES, AND STORES.

71. All vessels are required to have their masts, spars, and standing rigging in good order, and sails in sufficient number and good condition, and every ship is to be supplied with a good hempen stream-cable or tow-line of sufficient size and length, and with at least one good warp; and all vessels are to be provided with anchors of proper weight, and cables of approved quality, properly tested, in number and length according to the undermentioned scale:—

ANCHORS.

72. All vessels under 200 tons to have at least two bower anchors, and all vessels of 200 tons and above, to be provided with at least three bower anchors.

Cables.

	Tons.	Fathoms.
73. All vessels under 150	to have at least	150 if chain.
— of 150 and under 250	180	do.
— 250	350	200 do.
— 350	500	240 do.
— 500	700	270 do.
— 700 and upwards	300	do.

A Certificate of all new Chains having been tested, and of the strain applied to them, must be produced before a Ship is classed. The amount of strain applied should be marked on each length.

74. In all cases where hempen cables are used, one-sixth more in length will be required.

BOATS.

75. All vessels under 150 tons to be provided with one good Boat; and every vessel of 150 tons and above to have a suitable number, and to be provided with at least two good boats.

76. The efficient state and condition of ships' anchors, cables, and stores, will be designated by the figure 1; and where the same are found insufficient in quantity, or defective in quality, by the figure 2.

SHIPS NAVIGATED BY STEAM.

77. All sea-going vessels navigated by *Steam*, shall be required to be surveyed *twice in each year*, when a character will be assigned to them according to the report of survey.

78. That with respect to the Boilers and Machinery, the owners are required to produce to the Surveyors at the above-directed surveys, a certificate from some competent *Master Engineer*, describing their state and condition at those periods; and to which certificate it is desirable there should

be added a description of the particulars of the same, as far as may be practicable, in the manner and form annexed, No. 8; to be appended to the report of survey, and delivered to the Committee, who will thereupon insert in the Register Book the letters "M.C." denoting that the boilers and machinery have been inspected and certified to be in good order and safe working condition; but if no certificate of their condition be furnished by the Owner or Master, then no character can be assigned for the machinery.

79. HULL:—The Surveyors are directed to examine and report the scantling of timbers, plank, and fastenings, and to state where built, and by whom, in the same manner as directed for sailing vessels.

The following relaxation from the Rules applicable to sailing vessels will be allowed in favour of steamers.

Fir (to be either Pitch Pine, Baltic Red Fir, or American Red Pine), Larch, Hackmatack, or Juniper, may be used for upper deck beams, to an extent not exceeding *one-half* the number of beams required according to the vessel's tonnage.

The same materials may be used in the outside planking from the first foot-hook heads upwards, excepting for the wales, sheerstrakes, and planksheers.

The same materials may be likewise used in the inside planking, excepting for the bilge planks, shelf-pieces and stringers, and clamps.

Steam-vessels built in all other respects in conformity with the annexed tables shall be classed for the terms of years therein respectively prescribed, subject to the following conditions:—

That the Rule requiring a survey 'twice a year' be rigidly enforced, and that whenever the boilers are taken out, the vessel shall be subjected to a particular and special survey, in order to ascertain her general condition, and particularly the state of the Fir, or other materials herein allowed to be used.

That unless such surveys be held, the Characters which may have been assigned to steam-vessels shall be struck out annually on reprinting the Register Book.

80. SCANTLINGS:—The scantlings for a steam-vessel under 300 tons register including the engine room, are to be deemed sufficient, if equal to those required by the scale prescribed in the Rules of this Society for a sailing vessel of *two-thirds* of the total tonnage of such steam-vessel.

81. But for a steam-vessel *above* 300 tons register, including the engine room, the scantlings are to be equal to those required by the scale for a sailing vessel of *three-fourths* of the total tonnage of such steam-vessel.

82. FLOORS:—Where the vessel is not filled in solid to the floor-heads in the engine room, an exception will be specially made against any reduction of the scantling of the floors, which in such cases will not be permitted to be upon the reduced scale of two-thirds or three-fourths of the dimensions for the scantling of sailing vessels, as before stated; but the floors will then be required to be equal to the dimensions set forth in the Rules for ships of the tonnage of the steam-vessel, including the engine room.

Vessels fitted with Auxiliary steam power are considered to be sailing vessels (not steamers), and will not be allowed any exception as to their scantlings.

83. The Surveyors are required to report the number, size, length, fastenings, and mode of arrangement of the engine and boiler sleepers, and the description of timber of which they are composed, and whether diagonally trussed with wood or iron, and to what extent; the length, size, and fastenings of shelf-pieces and paddle-beams; and whether the vessel be constructed with sponcings, and how they are formed; and to give the length and shifting of the plank outside and inside.

84. MATERIALS AND STORES:—The Surveyors are to examine and report the number and description of the masts, sails, anchors, cables, hawsers, warps, and boats, as directed to be done for sailing vessels; but the anchors and cables will not be required to exceed in weight and length those of a sailing vessel of two-thirds of the total tonnage of the steam-vessel.

85. The Surveyors are to be particular in examining and reporting the condition of the boats of all vessels employed in carrying passengers.

SHIPS BUILT OF IRON.

The following Resolution for the classification of vessels built of Iron (until more defined Rules could be framed) was passed on the 4th January, 1844:—

“That the Character of A 1 will in future be granted to such ships as shall be constructed of Iron under the survey of the Surveyors to this Society, and be reported (Form No. 5), on their completion, to have been built of good and substantial materials, and with good workmanship.

“That Iron ships, already built, upon being subject to a careful and minute survey, and being reported to be in a high state of repair and efficiency, will also be classed as above; but if not so reported, they will be allowed such

other character as, on a due consideration of their respective claims, they may be found to deserve.

"That in every instance in which a character may be assigned to ships built of Iron, it must be understood that such ships must be subjected to a careful ANNUAL SURVEY, and that the continuance or otherwise of the character assigned will depend entirely upon the result of this survey.—And that vessels *not surveyed annually* will lose their character."

The Rules having been amended or altered in sections 31, 40, 46, 52, 53, 54, 59, and 60, in conformity with the several Resolutions passed by the Committee, the attention of Ship-owners and Ship-builders is respectfully invited to the consideration of these Rules, as well as the amended Tables for the Timbering, &c. of Ships, Table of Bolts, &c.

Under a Resolution passed by the Committee on the 19th September, 1850, the *date of build* of new ships hereafter launched, during the months of November and December, will be that of the year *succeeding*, provided the ships shall not have been previously registered or sent to sea.

By Order of the Committee,

CHARLES GRAHAM,

Secretary.

No. 2, White Lion Court, Cornhill,

London, 1st July, 1853.

SHIPS BUILT OF IRON.

The following Resolution for the classification of vessels built of Iron (which more defined Rules could be framed) was passed on the 4th January, 1844:—

"That the Character of A-1 will in future be granted to such ships as shall be constructed of Iron under the survey of the Surveyors to this Society, and be reported (Form No. 2) on their completion, to have been built of good and substantial materials, and with good workmanship.

"That Iron ships already built, upon being subject to a careful and minute survey, and being reported to be in a high state of repair and efficiency, will also be classed as above; but if not so reported, they will be allowed such

THE TIMBERING AND PLANKING OF SHIPS.

	Sheer- strakes and Planksheer	Waterways	INSIDE PLANK.				
			Limber Strake.	Bilge Planks.	Ceiling, Lower Hold,	Ceiling between Decks.	Shelf Pieces and Clamps.
Er							
F	12	12	12	12	12	12	12
G	12	12	12	12	12	12	12
M							
C	10	12	12	12	12	12	12
A	9	10	12	12	12	12	12
Sc							
I	9	10	12	12	12	12	10
+R	10	12	12	12	12	12	12
F							
C	8	8	10	10	10	10	10
L							
J	7	10	7	7	8	8	8
P	8	10	8	8	9	10	8
Sc							
C	—	5	5	5	5	5	4
C	7	10	7	7	8	8	8
R	6	10	7	7	8	8	7
A	—	—	5	5	5	5	4
A	—	—	5	5	5	5	4
A							
C	5	5	6	6	6	6	6
E	—	—	5	5	5	5	4
B	4	4	5	5	5	5	4
W	4	4	5	5	5	5	4
S	4	4	5	5	5	5	4
E	—	—	5	5	5	5	4
Y	4	5	5	5	5	5	5

al.

y.

top of the Limber Strake to the top of the Upper Deck Beams.
in Ships of the 7 years' class.

n Ships of the 7 years' class.

s, page 24.

other character as, on a due consideration of their respective claims, they may be found to deserve.

"That in every instance in which a character may be assigned to ships built of Iron, it must be understood that such ships must be subjected to a careful ANNUAL SURVEY, and that the continuance or otherwise of the character assigned will depend entirely upon the result of this survey.—And that vessels *not surveyed annually* will lose their character."

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The following Resolution for the classification of vessels built of Iron (until more defined Rules could be framed) was passed on the 4th January, 1844:—

"That the Character of A-1 will in future be granted to such ships as shall be constructed of Iron under the survey of the Surveyors to this Society, and be reported (Form No. 2) on their completion, to have been built of good and substantial materials, and with good workmanship.
"That Iron ships already built, upon being subject to a careful and minute survey, and being reported to be in a high state of repair and efficiency, will also be classed as above; but if not so reported, they will be allowed such

A TABLE EXHIBITING THE NUMBER OF YEARS ASSIGNED TO THE DIFFERENT DESCRIPTIONS OF TIMBER OF GOOD QUALITY AS USED

THE TIMBERING AND PLANKING OF SHIPS.

	TIMBERING.									OUTSIDE PLANK.						INSIDE PLANK.					
	Floors.	First Foothooks.	Second Foothooks.	Third Foothooks and Top Timbers.	Keelson.	Stem and Stern Post.	Transoms, Knight-heads, Hawse-Timbers, Apron, and Deadwood*	Beams and Hooks.	Knees.	Keel to First Futtock Heads.	First Futtock Heads to Light Mark	Light Mark to Wales.	Wales and Black-Strakes.	Topsides.	Sheer-strakes and Plank-sheer.	Waterways.	Limber Strake.	Bilge Planks.	Ceiling, Lower Hold.	Ceiling between Decks.	Shelf Pieces and Clamps.
English, African, and Live Oak, East-India Teak, and Morung Saul	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Greenheart, Morra, and Iron Bark	12	12	12	12	12	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12	
Mahogany of Hard Texture and Cuba Sabicu	10	10	10	10	10	10	10	12	12	12	12	10	10	10	10	12	12	12	12	12	
Adriatic, Spanish, or French Oak	10	10	9	9	10	9	9	10	10	12	12	10	9	9	9	10	12	12	12	12	
South American and Australasian Hard Wood	10	10	9	9	10	9	9	10	10	12	12	10	9	9	9	10	12	12	12	10	
† Red or Pencil Cedar	9	9	9	9	10	9	9	10	10	12	12	12	10	12	10	12	12	12	12	12	
Foreign White Oak and Spanish Chesnut	9	9‡	7	7	9	7	7	8	8	12	12	9	8	8	8	8	10	10	10	10	
Larch, Hackmatack, Tamarac, and Juniper	7	7	7	7	7	7	7	7	7	10	9	8	7	7	7	10	7	7	8	8	
Pitch Pine	6	6	6	7	7	6	6	8	8	10	10	9	8	10	8	10	8	8	9	10	
Second-hand English or African Oak or East-India Teak	7	7	6	6	6	5	6	6	6	—	—	—	—	—	—	5	5	5	5	4	
Cowdie	6 ¶	6	6	7	7	6	6	7	7	10	9	8	7	7	7	10	7	7	8	8	
Red Pine Fir, Baltic or American	5	5	5	7	6	5	5	7	7	9	9	8	7	7	6	10	7	7	8	7	
Ash, English	7	6	5	5	5	4	4	5	5	10	7	4	—	—	—	—	5	5	5	4	
Ash, Foreign	5	5	4	4	5	4	4	5	5	10	7	4	—	—	—	—	5	5	5	4	
American Rock Elm and Hard Grey Elm	6 ¶	6	5	5	6	5	5	5	5	12§	8	6	5	5	5	5	6	6	6	6	
Elm, English or French	5	5	4	4	—	—	4	5	5	12§	8	5	—	—	—	—	5	5	5	4	
Black Birch	5 ¶	5**	4	4	4	4	4	4	4	10	7	4	4	4	4	4	5	5	5	4	
Witch Hazel	5 ¶	5	4	4	4	4	4	4	4	5	5	4	4	4	4	4	5	5	5	4	
Spruce	5	5	4	4	4	4	4	4	7	6	5	4	4	4	4	4	5	5	5	4	
English Beech	5	4	—	—	4	—	—	—	—	12	8	4	—	—	—	—	5	5	5	4	
Yellow Pine	—	—	—	4	4	4	4	4	4	6	5	5	5	5	4	5	5	5	5	5	

* This Table applies as to the Deadwood so far as regards the Material to be used from the height of two feet above the rabbet of the Keel.

† Live Oak and Red or Pencil Cedar admitted alternately in Timbers of the Frame for 10 A.

‡ In cases where the First Foothooks run up above the Light Watermark, the use of Foreign White Oak is allowed for the 7 years' grade only.

§ The use of Elm, in Ships above the 8 years' grade, to be restricted to a height from the lower part of the Main Keel, of one-third of the internal depth of the Ship measured, in midships, from the top of the Limber Strake to the top of the Upper Deck Beams.

¶ Black Birch, Witch Hazel, American Rock Elm, and Cowdie, allowed for Floors in Midships, to an extent not exceeding one-half the entire length of the Keel, in Ships of the 7 years' class.

** Black Birch allowed for First Futtocks amidships, to the same extent in Ships of the 6 years' class.

American Rock Elm allowed for Inside Planking, from the Limber Strakes to the Bilge Plank, to an extent not exceeding two-thirds the entire length of the Keel in Ships of the 7 years' class.

MEM.—The word "English" includes Timber the growth of the United Kingdom. — For relaxation in favour of Steam Vessels, *vide* Rules, page 24.

TABLE OF MINIMUM DIMENSIONS OF TIMBERS, KEELSON, KEEL, PLANKING, &c.

TONNAGE	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1050	1150	1250	1350
TIMBER AND SPACE	18	19	20	21½	23	24½	25¾	27¼	28½	30	30¾	30¾	30¾	30¾	30¾	30¾	30¾	30¾	30¾	31	31¾	31½	31¾
Floors, sided and moulded at Keelson, if square	7	7½	8	8¾	9½	10¾	11	11¾	12¼	13	13¾	13¾	13¾	13¾	13¾	13¾	14	14	14¼	14½	14¾	15	15¼
Double Floors, sided and moulded at Keelson, if square	6	6½	7	7¾	8½	9¾	10	10½	11¼	12	12¾	12¾	12¾	12¾	12¾	12¾	13	13	13¼	13½	13¾	14	14¼
1st Futtocks, sided and moulded at Floor Heads, if square ..	6	6½	7	7¾	8½	9¾	10	10½	11¼	12	12¾	12¾	12¾	12¾	12¾	12¾	13	13	13¼	13½	13¾	14	14¼
2nd Futtocks, sided, if square	5½	6	6½	7	7½	8	8½	9	9½	10	10¼	10½	10¾	10¾	11	11¼	11½	11¾	12	12¼	12½	12¾	13
3rd Futtocks and Long Top Timbers, sided, if square	5½	5¾	6	6½	7	7¼	7¾	8¼	8½	9	9½	9¾	9¾	9¾	10	10¼	10½	10¾	11	11¼	11½	11¾	12
Top Timbers (Short) sided, if square .....	..	..	..	..	..	..	..	..	..	9	9¼	9¼	9¼	9½	9½	9½	9¾	9¾	10	10	10¼	10½	10¾
Top Timbers, moulded at head's, if square.....	4	4½	4¾	5	5	5¼	5½	5¾	6	6	6¼	6¼	6¼	6½	6¾	6¾	7	7	7¼	7½	7¾	8	8½
Breasthooks & Wing Trams, sided & moulded in the middle	8	8½	9	9¾	10¼	10¾	11¼	12	12½	13	13¼	13¾	13¾	13¾	13¾	13¾	14	14	14¼	14½	14¾	15	15¼
Keel, Stem, Apron, and Sternpost, sided and moulded	8	9	10	10¾	11¼	11¾	12¼	13	13½	14	14¼	14¼	14¼	14½	14¾	14¾	15	15	15¼	15½	15¾	16	16¼
Keelson, sided and moulded.....	9	10	11	11¾	12¼	12¾	13¼	14	14½	15	15¼	15¼	15½	15½	15¾	15¾	16	16	16¼	16½	16¾	17	17¼
Wales.....	3	3½	4	4¼	4½	4¾	4¾	5	5	5	5	5¼	5¼	5¼	5½	5½	5½	5¾	6	6	6	6	6¼
*Bottom Plank, from Keel to Wales.....	2	2¼	2½	2¾	3	3¼	3½	3¾	3¾	4	4	4	4	4	4	4¼	4¼	4¼	4½	4½	4½	4½	4½
Sheer Strakes, Topsides, Upper Deck Clamp where there is no Shelf fitted, and Lower Deck Clamp with a Shelf	2¼	2½	3	3¼	3½	3¾	3¾	3¾	4	4	4	4	4	4¼	4¼	4¼	4¼	4½	4½	4½	4½	4½	5
Ceiling below Hold Beam Clamp	1½	1¾	2	2¼	2½	2¾	2¾	2¾	3	3	3	3¼	3¼	3¼	3¼	3½	3½	3½	3½	3¾	3¾	4	4
†Waterway, { Hardwood.....	3	3½	4	4¼	4½	4¾	4¾	4¾	5	5	5¼	5¼	5¼	5½	5¾	5¾	6	6	6	6¼	6¼	6½	6½
{ Fir	4	4½	5	5½	6	6½	6¾	7	7½	8	8¼	8¼	8¼	8½	8¾	8¾	9	9	9	9¼	9¼	9½	9½
Ceiling betwixt Decks and Sheer Strake of Poop and Forecastle	1½	1¾	2	2¼	2½	2¾	2¾	2¾	2½	2½	2½	2½	2½	2¾	2¾	2¾	2¾	2¾	2¾	2¾	3	3	3
Bilge Plank, inside, and Limber Strake	2½	2¾	3	3¼	3½	3¾	3¾	3¾	4	4	4¼	4¼	4½	4½	4¾	4¾	5	5	5¼	5½	5¾	6	6¼
Lower Deck Clamp where there is no shelf fitted, and Spirketting .....	..	..	3	3¼	3½	3¾	4	4	4¼	4½	4½	4¾	4¾	4¾	4¾	4¾	5	5	5	5¼	5½	5½	5½
Upper Deck Clamp where a shelf is also fitted.....	2	2¼	2½	2¾	3	3¼	3½	3¾	3¾	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Planksheer	2	2¼	2½	2¾	3	3¼	3½	3¾	3¾	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Flat of Upper Deck	2½	2½	2½	2½	2½	3	3	3	3	3½	3½	3½	3½	3½	3½	3½	3½	3½	3½	4	4	4	4
Scarp's of Keelson without Rider	ft. in. 4 6	ft. in. 4 9	ft. in. 5 0	ft. in. 5 3	ft. in. 5 6	ft. in. 5 10	ft. in. 6 2	ft. in. 6 6	ft. in. 6 9	ft. in. 7 0	ft. in. 7 0	ft. in. 7 0	ft. in. 7 0	ft. in. 7 0	ft. in. 7 3	ft. in. 7 3	ft. in. 7 3	ft. in. 7 3	ft. in. 7 6	ft. in. 7 6	ft. in. 7 9	ft. in. 7 9	ft. in. 8 0
Ditto, where Rider Keelson is added, also Scarp's of Keel ..	4 0	4 3	4 6	4 9	5 0	5 2	5 4	5 6	5 9	6 0	6 0	6 0	6 0	6 0	6 3	6 3	6 3	6 3	6 6	6 6	6 9	6 9	7 0

Moulding of Futtocks and Top Timbers to gradually diminish from size given at Floor Heads to that at Top Timber Heads. See Rule, sec. 38.

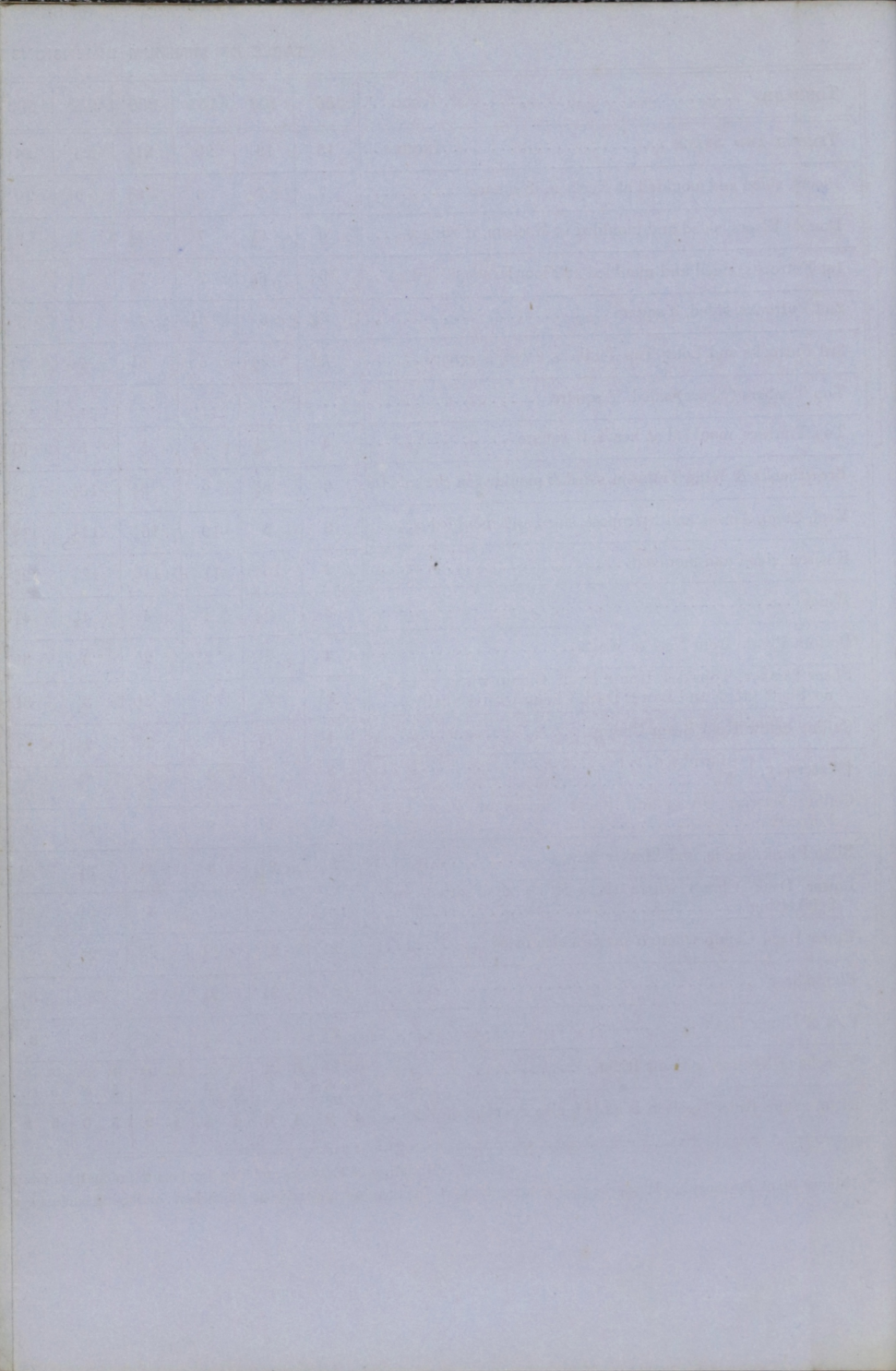
* Thinner Plank for short hoods may be used as heretofore. † Depth below underside of Planksheer, or Faying Surface against Timbers, to receive in and out through Bolts at alternate Timbers, with alternate through bolts in Shelf, and in Clamps where there is no Shelf.

TABLE FOR SIDING AND MOULDING OF BEAMS

LENGTH OF BEAM amid-ships.	HOLD BEAMS		DECK BEAMS	
	sided and moulded.	moulded at ends.	sided and moulded.	moulded at ends.
Feet.	Inches.	Inches.	Inches.	Inches.
10	—	—	4½	3¾
11	—	—	5	4
12	—	—	5¼	4¼
13	—	—	5½	4½
14	—	—	5¾	4¾
15	8	6¾	6¼	5¼
16	8½	7	6½	5½
17	8¾	7½	6¾	5¾
18	9¼	7¾	7	5¾
19	9½	8	7¼	6
20	10	8½	7½	6¼
21	10¼	8¾	7¾	6½
22	10½	9	8	6¾
23	11	9¼	8¼	6¾
24	11¼	9½	8½	7
25	11¾	9¾	8¾	7¼
26	12	10	8¾	7½
27	12½	10¼	9	7½
28	12¾	10½	9	7¾
29	12¾	10¾	9¼	7¾
30	13	11	9½	8
31	13¼	11¼	9½	8
32	13½	11½	9¾	8¼
33	13¾	11¾	10	8¼
34	14	11¾	10	8½
35	14¼	12	10¼	8½
36	14½	12¼	10¼	8½
37	14¾	12½	10½	8¾
38	15	12½	10½	8¾
39	15½	12¾	10¾	9
40	15½	13	10¾	9

The siding and moulding of all the Beams to be the same as those amidships, except those at the after end of the Ship, which may be reduced in proportion to their diminished length.
MEN.—When SPACE or YELLOW PINE is used for Beams the dimensions are to be increased.—See sec. 40, page 12.

N.B.—The size of the Middle Deck Beams, and of Orlop Beams, to be the mean of the sizes here prescribed.



TONNAGE.....Not exceeding Tons	50	100	150	200	250	300	350	400	450	500	700	900	1350
Heel-Knee, Stemson, and Deadwood Bolts .....Inches	$\frac{7}{8}$	$\frac{15}{16}$	1	1	$1\frac{1}{16}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{5}{16}$	$1\frac{3}{8}$	$1\frac{1}{2}$
Bolts in Scarphs of Keel,* Arms of Breast Hooks, Pointers, Crutches, Riders, Hanging and Lodging Knees to Hold or Lower Deck Beams (except in and out Throat Bolts of Hanging Knees, which must be larger), also in and out Bolts of Shelf, Clamp, and Waterway of Hold or Lower Deck Beams, and the in and out Throat Bolts of Upper Deck Hanging Knees	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{15}{16}$	$\frac{15}{16}$	1	$1\frac{1}{8}$	$1\frac{3}{16}$	$1\frac{1}{4}$
Keelson Bolts (one through Keel at each Floor), Throats of Transoms, Throats of Breasthooks, and Throats of Hanging Knees to Hold or Lower Deck Beams	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{15}{16}$	1	1	$1\frac{1}{16}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{3}{8}$
Bilge, Limber Strake, and Through Butt Bolts.	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{15}{16}$	1
Other Butt Bolts	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{11}{16}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$
In and out Bolts of Upper Deck Waterway, Shelf and Clamp, also Arms of Hanging and Lodging Knees, except in and out Throat Bolts of Hanging Knees, which must be larger, as above	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{13}{16}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{15}{16}$	1	$1\frac{1}{8}$
Pintles of Rudder { The Braces of which must extend so as to receive not less than Two Bolts on the Planking on each side. }	$1\frac{7}{8}$	2	2	$2\frac{1}{4}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{5}{8}$	$2\frac{3}{4}$	3	3	$3\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{1}{2}$
Hardwood Treenails	1	1	1	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{1}{2}$

Tons.	To Hold Beams. PAIRS.	To Upper Deck Beams. PAIRS.
150		4
200	4	6
250	5	7
300	6	8
350	7	9
400	8	10
450	8	11
500	9	12
550	9	13
600	10	14
650	10	15
700	11	16
750	11	17
800	12	18
900	13	20
1000	14	22
1100	15	24
1350	17	26

* NUMBER OF BOLTS IN SCARPHS OF KEEL:—

In Ships of 150 Tons and under 6 Bolts
 „ above 150 Tons and under 500 tons .. 7 do.
 „ 500 Tons and above 8 do.

N.B.—Bolts to be through and clenched, as prescribed in Section 46. Page 13.

PARTS OF THE FRAME OF A VESSEL.	TWELVE YEARS.	TEN YEARS.	NINE YEARS.	EIGHT YEARS.
*FLOORS	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Live Oak and Red Cedar alternately Adriatic, Spanish, or French Oak South American, } Hard or } Wood Australasian Mahogany Cuba Sabcu.	The same as in the preceding Class, and admit Other Foreign White Oak Red Cedar Spanish Chesnut.	The same as in the preceding Class.
1st FUTTOCKS }	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Live Oak and Red Cedar alternately Adriatic, Spanish, or French Oak South American or Australasian Hard Wood Mahogany Cuba Sabcu.	The same as in the preceding Class, and admit Other Foreign White Oak below the light water mark Red Cedar Spanish Chesnut.	The same as in the preceding Class.
2d FUTTOCKS.. }	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Live Oak and Red Cedar alternately Mahogany Cuba Sabcu.	The same as in the preceding Class, and admit Adriatic Spanish } Oak French } South American or Australasian Hard Wood Red Cedar.	The same as in the preceding Class.
3d FUTTOCKS.. and TOP TIMBERS }	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Live Oak and Red Cedar alternately Mahogany Cuba Sabcu.	The same as in the preceding Class, and admit Adriatic Spanish } Oak French } South American, } Hard or } Wood Australasian Red Cedar.	The same as in the preceding Class.
STEM	English } Oak African } Live } East-India Teak Morung Saul.	The same as in the preceding Class, and admit Mahogany Cuba Sabcu Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Adriatic Spanish } Oak French } South American or Australasian Hard Wood Red Cedar.	The same as in the preceding Class.
STERN POST.. }	English } Oak African } Live } East-India Teak Morung Saul.	The same as in the preceding Class, and admit Mahogany Cuba Sabcu Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Adriatic Spanish } Oak French } South American or Australasian Hard Wood Red Cedar.	The same as in the preceding Class.
TRANSOMS	English } Oak African } Live } East-India Teak Morung Saul.	The same as in the preceding Class, and admit Mahogany Cuba Sabcu Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Adriatic Spanish } Oak French } South American or Australasian Hard Wood Red Cedar.	The same as in the preceding Class.
KNIGHTHEADS				
HAWSE TIMBERS.....				
APRON				
‡DEADWOOD .. }	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Adriatic, Spanish, or French Oak South American, or Australasian Hard Wood Red Cedar Mahogany Cuba Sabcu.	The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut.	The same as in the preceding Class.
MAIN KELSON }	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Adriatic, Spanish, or French Oak South American, or Australasian Hard Wood Red Cedar Mahogany Cuba Sabcu.	The same as in the preceding Class.	The same as in the preceding Class.
BEAMS	English } Oak African } Live } East-India Teak Morung Saul Greenheart Morra Mahogany Cuba Sabcu Iron Bark.	The same as in the preceding Class, and admit Adriatic Spanish } Oak French } South American Hard Wood Australasian ditto Red Cedar	The same as in the preceding Class.	The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut Pitch Pine.
HOOKS				
and				
KNEES.....				

* Black Birch, Witch Hazel, American Rock Elm, Hard Gray Elm, and Cowdie allowed for Floons in Midships,
† Black Birch allowed for First Futtocks amidships, to the same extent in Ships of the Six Years Class.

‡ So far as regards the Material to be used from the height of two feet above the rabbet of the keel.

Quality, to be used in the TIMBERING of SHIPS, as the same will be applicable for Ships to remain on the Character A.

SEVEN YEARS.	SIX YEARS.	FIVE YEARS.	FOUR YEARS.	PARTS OF THE FRAME OF A VESSEL.
The same as in the preceding Class, and admit English Ash Sound second-hand English or African Oak, or Teak Hackmatack Tamarac Juniper Larch.	The same as in the preceding Class, and admit Cowdie Pitch Pine American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Baltic Fir Red Pine Black Birch Witch Hazel Elm or Ash [lity Hard Wood of good qua- English Beech Spruce.	The same as in the preceding Class.	*FLOORS.
The same as in the preceding Class, and admit Other Foreign White Oak above the light water mark Sound second-hand English or African Oak, or Teak Hackmatack—Tamarac Juniper—Larch.	The same as in the preceding Class, and admit English Ash Cowdie Pitch Pine American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Baltic Fir Red Pine Black Birch Witch Hazel Elm or Ash [lity Hard Wood of good qua- Spruce.	The same as in the preceding Class, and admit English Beech.	1st FUTTOCKS.
The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut Hackmatack Tamarac—Juniper Larch.	The same as in the preceding Class, and admit Cowdie Sound second-hand English or African Oak, or Teak Pitch Pine.	The same as in the preceding Class, and admit Baltic Fir Red Pine. English Ash American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Elm Ash Black Birch Witch Hazel Spruce.	2d FUTTOCKS.
The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut Hackmatack—Tamarac Juniper—Larch Pitch Pine—Red Pine Baltic Fir—Cowdie.	The same as in the preceding Class, and admit Sound second-hand * English or African Oak, or Teak.	The same as in the preceding Class, and admit English Ash American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Elm Ash Black Birch Witch Hazel Spruce.	3d FUTTOCKS and TOP TIMBERS.
The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut. Hackmatack Tamarac—Juniper Larch.	The same as in the preceding Class, and admit Cowdie Pitch Pine.	The same as in the preceding Class, and admit Second-hand English or African Oak, or Teak American Rock Elm Hard Gray Elm Red Pine.	The same as in the preceding Class, and admit Black Birch Witch Hazel Ash Spruce Yellow Pine.	STEM STERN POST.
The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut Hackmatack Tamarac—Juniper Larch.	The same as in the preceding Class, and admit Cowdie Sound second-hand English or African Oak, or Teak Pitch Pine.	The same as in the preceding Class, and admit Baltic Fir Red Pine American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Elm Ash Black Birch Witch Hazel Spruce.	TRANSOMS KNIGHTHEADS HAWSE TIMBERS APRON ‡DEADWOOD.
The same as in the preceding Class, and admit Pitch Pine Larch Hackmatack Tamarac Juniper Cowdie.	The same as in the preceding Class, and admit Baltic Fir Red Pine American Rock Elm Hard Gray Elm Second-hand English or African Oak, or Teak.	The same as in the preceding Class, and admit Ash.	The same as in the preceding Class, and admit Yellow Pine Black Birch Witch Hazel Spruce. English Beech.	MAIN KELSON.
The same as in the preceding Class, and admit Larch Hackmatack Tamarac Juniper—Cowdie Knees of Fir, Pine, or Spruce Baltic Fir Red Pine.	The same as in the preceding Class, and admit Sound second-hand English or African Oak, or Teak.	The same as in the preceding Class, and admit Elm Ash.	The same as in the preceding Class, and admit Yellow Pine Black Birch Witch Hazel Spruce.	BEAMS HOOKS and KNEES.

to an extent not exceeding one half the entire length of the Keel, in Ships of the Seven Years' Class.

MEM.—For relaxation in favour of Steam Vessels, vide Rules, page 26.

No. 2.—A TABLE exhibiting the different Descriptions of TIMBER, of good
applicable to the several Terms of Years appointed

PARTS OF THE OUTSIDE OF A VESSEL.	TWELVE YEARS.	TEN YEARS.	NINE YEARS.	EIGHT YEARS.
KEEL to the 1st FUTTOCK HEADS.....	English, African, or Live Oak East-India Teak Red Cedar Foreign White Oak *Elm Beech South American, or any Hard Wood Mahogany Spanish Chesnut Cuba Sabcu	The same as in the preceding Class, and admit Pitch Pine Larch Hackmatack Tamarac Juniper Black Birch Cowdie. Ash.	The same as in the preceding Class, and admit Baltic Fir Red Pine.	The same as in the preceding Class.
1st FUTTOCK HEADS to LIGHT WATER MARK	English, African, or Live Oak East-India Teak Red Cedar Foreign White Oak South American, } Hard or } Wood Australasian Mahogany Spanish Chesnut Cuba Sabcu. Greenheart Morra—Iron Bark	The same as in the preceding Class, and admit Pitch Pine.	The same as in the preceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.	The same as in the preceding Class, and admit Elm. English Beech.
LIGHT WATER MARK to WALES	English } Oak African } Live } East-India Teak Morung Saul Red Cedar Greenheart Morra Iron Bark.	The same as in the preceding Class, and admit Adriatic, Spanish, or French Oak South American, } Hard or } Wood Australasian Mahogany. Cuba Sabcu.	The same as in the preceding Class, and admit Foreign White Oak Pitch Pine Spanish Chesnut.	The same as in the preceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.
WALES and BLACKSTRAKES	English } Oak African } Live } East-India Teak Greenheart Morra Morung Saul Iron Bark.	The same as in the preceding Class, and admit Red Cedar Mahogany. Cuba Sabcu.	The same as in the preceding Class, and admit Adriatic } Spanish } Oak French } South American, } Hard or } Wood Australasian }	The same as in the preceding Class, and admit Other Foreign White Oak Pitch Pine Spanish Chesnut.
TOPSIDES.....	English } Oak African } Live } East-India Teak Red Cedar Greenheart Morra Morung Saul Iron Bark.	The same as in the preceding Class, and admit Pitch Pine. Mahogany. Cuba Sabcu.	The same as in the preceding Class, and admit Adriatic } Spanish } Oak French } South American, } Hard or } Wood Australasian }	The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut.
SHEERSTRAKES and PLANKSHEER..	English } Oak African } Live } East-India Teak Greenheart Morra Morung Saul Iron Bark.	The same as in the preceding Class, and admit Red Cedar Mahogany. Cuba Sabcu.	The same as in the preceding Class, and admit Adriatic } Spanish } Oak French } South American, } Hard or } Wood Australasian }	The same as in the preceding Class, and admit Other Foreign White Oak Spanish Chesnut Pitch Pine.
WATERWAYS	English } Oak African } Live } East-India Teak Red Cedar Greenheart Morra Morung Saul Mahogany. Cuba Sabcu Iron Bark.	The same as in the preceding Class, and admit South American, } Hard or } Wood Australasian Baltic Fir—Pitch Pine Red Pine—Larch Hackmatack—Tamarac Juniper—Cowdie. Adriatic } Spanish } Oak French }	The same as in the preceding Class.	The same as in the preceding Class, and admit Foreign White Oak Spanish Chesnut.

* The use of Elm, in Ships above the EIGHT YEARS grade, to be restricted to a height from the lower part of the main Keel, of one-third of the internal depth of the Ship measured, in midships, from the top of the Limber Strake to the top of the Upper Deck Beams.

Quality, to be used in the OUTSIDE PLANKING of SHIPS, as the same will be for Ships to remain on the Character A.

SEVEN YEARS.	SIX YEARS.	FIVE YEARS.	FOUR YEARS.	PARTS OF THE OUTSIDE OF A VESSEL.
The same as in the preceding Class.	The same as in the preceding Class, and admit Spruce Yellow Pine.	The same as in the preceding Class, and admit Witch Hazel.	The same as in the preceding Class.	<div> <div>KEEL</div> <div>to the</div> <div>1st FUTTOCK HEADS.</div> </div>
The same as in the preceding Class, and admit Ash Black Birch.	The same as in the preceding Class.	The same as in the preceding Class, and admit Yellow Pine Spruce Witch Hazel.	The same as in the preceding Class.	
				<div> <div>1st FUTTOCK HEADS</div> <div>to</div> <div>LIGHT WATER MARK.</div> </div>
The same as in the preceding Class	The same as in the preceding Class, and admit American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Elm, English or French	The same as in the preceding Class, and admit Spruce Black Birch Ash Witch Hazel English Beech.	<div> <div>LIGHT WATER MARK</div> <div>to</div> <div>WALES.</div> </div>
The same as in the preceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper — Cowdie.	The same as in the preceding Class.	The same as in the preceding Class, and admit Yellow Pine American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Spruce Black Birch Witch Hazel.	<div> <div>WALES</div> <div>and</div> <div>BLACKSTRAKES</div> </div>
The same as in the preceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.	The same as in the preceding Class.	The same as in the preceding Class, and admit Yellow Pine American Rock Elm. Hard Gray Elm.	The same as in the preceding Class, and admit Spruce Black Birch Witch Hazel.	<div> <div>TOPSIDES.</div> </div>
The same as in the preceding Class, and admit Larch Hackmatack Tamarac Juniper Cowdie.	The same as in the preceding Class, and admit Baltic Fir Red Pine.	The same as in the preceding Class, and admit American Rock Elm. Hard Gray Elm.	The same as in the preceding Class, and admit Spruce Yellow Pine Black Birch Witch Hazel.	<div> <div>SHEERSTRAKES</div> <div>and</div> <div>PLANKSHEER.</div> </div>
The same as in the preceding Class, and admit Yellow Pine for the upper deck, provided the beams are well secured independently of the waterways.	The same as in the preceding Class.	The same as in the preceding Class, and admit Yellow Pine American Rock Elm. Hard Gray Elm Second-hand English or African Oak, or Teak.	The same as in the preceding Class, and admit Spruce Black Birch Witch Hazel.	<div> <div>WATERWAYS.</div> </div>

No. 3.—A TABLE exhibiting the different Descriptions of TIMBER, of good
applicable to the several Terms of Years

PARTS OF THE INSIDE OF A VESSEL.	TWELVE YEARS.	TEN YEARS.	NINE YEARS.	EIGHT YEARS.
LIMBER STRAKE	English } African } Oak Adriatic } Spanish } French } East-India Teak Morung Saul Red Cedar Mahogany Greenheart Cuba Sabicu Iron Bark South American, or Aus- tralasian Hard Wood.	The same as in the pre- ceding Class, and admit Other Foreign White Oak Spanish Chesnut.	The same as in the pre- ceding Class.	The same as in the pre- ceding Class, and admit Pitch Pine.
BILGE PLANKS	English } African } Oak Adriatic } Spanish } French } East-India Teak Morung Saul Red Cedar Mahogany Greenheart Cuba Sabicu Iron Bark South American, or Aus- tralasian Hard Wood.	The same as in the pre- ceding Class, and admit Other Foreign White Oak Spanish Chesnut.	The same as in the pre- ceding Class.	The same as in the pre- ceding Class, and admit Pitch Pine.
CEILING.	English } African } Oak Adriatic } Spanish } French } East-India Teak Morung Saul Red Cedar Mahogany Greenheart Cuba Sabicu Iron Bark South American, or Aus- tralasian Hard Wood.	The same as in the pre- ceding Class, and admit Other Foreign White Oak Spanish Chesnut.	The same as in the pre- ceding Class, and admit Pitch Pine.	The same as in the pre- ceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.
	English } African } Oak Adriatic } Spanish } French } East-India Teak Morung Saul Red Cedar Mahogany Greenheart Cuba Sabicu Iron Bark South American, or Aus- tralasian Hard Wood.	The same as in the pre- ceding Class, and admit Other Foreign White Oak Pitch Pine Spanish Chesnut.	The same as in the pre- ceding Class.	The same as in the pre- ceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.
SHELF PIECES and CLAMPS	English } African } Oak Adriatic } Spanish } French } East-India Teak Morung Saul Red Cedar Greenheart Morra Mahogany Cuba Sabicu Iron Bark.	The same as in the pre- ceding Class, and admit Foreign White Oak South American, or Aus- tralasian Hard Wood Spanish Chesnut.	The same as in the pre- ceding Class.	The same as in the pre- ceding Class, and admit Pitch Pine Larch Hackmatack Tamarac Juniper Cowdie.

American Rock Elm allowed for Inside Planking from Limber Strakes to Bilge Planks, in Midships, to an extent not exceeding two-thirds of the entire length of the keel, in Ships of the seven years' grade.

Quality, to be used in the **INSIDE PLANKING** of **SHIPS**, as the same will be for Ships to remain on the **Character A**.

SEVEN YEARS.	SIX YEARS.	FIVE YEARS.	FOUR YEARS.	PARTS OF THE INSIDE OF A VESSEL.
The same as in the preceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.	The same as in the preceding Class, and admit American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Black Birch Spruce Second hand English or African Oak, or Teak. Ash Elm Witch Hazel English Beech.	The same as in the preceding Class.	LIMBER STRAKE.
The same as in the preceding Class, and admit Baltic Fir Red Pine Larch Hackmatack Tamarac Juniper Cowdie.	The same as in the preceding Class, and admit American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Black Birch Spruce Second hand English or African Oak, or Teak Ash Elm Witch Hazel English Beech.	The same as in the preceding Class.	BILGE PLANKS.
The same as in the preceding Class.	The same as in the preceding Class, and admit American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Black Birch Spruce Second hand English or African Oak, or Teak Ash Elm Witch Hazel English Beech.	The same as in the preceding Class.	LOWER HOLD.
The same as in the preceding Class.	The same as in the preceding Class, and admit American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine Black Birch Spruce Second-hand English or African Oak, or Teak Ash Elm Witch Hazel English Beech.	The same as in the preceding Class.	BETWEEN DECKS.
The same as in the preceding Class, and admit Baltic Fir Red Pine.	The same as in the preceding Class, and admit American Rock Elm Hard Gray Elm.	The same as in the preceding Class, and admit Yellow Pine.	The same as in the preceding Class, and admit Spruce Black Birch Second-hand English or African Oak, or Teak Ash Elm Witch Hazel English Beech.	SHELF PIECES and CLAMPS.

CEILING.

FORM OF THE REPORT OF SURVEY.

No. — Survey held at — Date — 185 — on the — Master —
 Tonnage { Old — Built at — When built — Launched —
 { New —
 By whom built — Owners — Port belonging to — Destined Voyage —
 If Surveyed while building, Afloat, or in Dry Dock —

Length aloft	Feet.		Inches.		Extreme Breadth	Feet.		Inches.		Depth of Hold	Feet.		Inches.	

SCANTLINGS OF TIMBER.

	Inch.	Inch.	Inch.	Ends
Room and Space				
Floors.....sided		Moulded		
1st Foothooks				
2d Ditto				
3d Ditto				
Top Timbers				
Deck Beams No. ... { Average				
{ Space				
Hold Beams No. ... { Average				
{ Space				
Keel				
Kelsons				
Scarphs of Ditto				

THICKNESS OF PLANK.

	Inch.		Inch.
OUTSIDE.		INSIDE.	
Keel to Bilge		Lumber Strakes	
Bilge Planks		Bilge Planks	
Bilge to Wales		Ceiling in Flat.....	
Wales		Ditto Bilge to Clamp	
Short Hoods		Hold Beam Clamps..	
Topsides		Deck Beam Ditto ...	
Sheerstrakes		Ceiling 'twixt Decks	
Plankshears		Hold Beam Shelves ..	
Waterways ...		Deck Beam ditto.....	
Upper Deck			

SIZE OF BOLTS IN FASTENINGS, DISTINGUISHING WHETHER COPPER OR IRON.

	Copper	Iron		Copper	Iron
	Inches.	Inches.		Inches.	Inches.
Heel-Knee and Deadwood abaft ...			Bolts through Bilge and Limber		
Scarphs of Keel No.....			Strakes		
Floor Timber Bolts			Butt End Bolts		
Kelson ditto ..			Lower Pintle of the Rudder		
Transoms and throats of Hooks.....			Hold Beam		
Arms of Hooks			Deck Beam		

TIMBERING.—The Space between the Floor Timbers and Lower Foothooks in this Vessel is — Inches. The Space between the Top Timbers is — Inches. The Stem, Stern-Post consist of —, the Transoms, Aprons, Knightheads, Hawse Timbers, and Deadwood, of — and are — free from all defects.

The Floors consist of — The First Foothooks of — Timber.

The Second Foothooks of — The Third Foothooks of — The Top Timbers of —

The Shifts of the first and second Foothooks are not less than —

[N.B. When less than prescribed by the Rule, state how many.]

The rest of the Shifts of the Frames are —

The Frame is — squared from the first Foothook Heads upwards, and — free from sap, and from thence downwards the Frame is —

The alternate Frames are — bolted together to the Gunwale.

[N.B. If not, state how bolted.]

The Butts of the Timbers are — close together ; their thickness not less than — of the entire moulding at that place.

The frame is — chocked with — Butt at each end of the chock.

The Main Kelson is _____ and free from all defects. The False Kelson is _____

The Deck Beams consist of _____ The Hold Beams of _____ The Knees of _____

PLANKING OUTSIDE.—From the Keel to the Height defined in Note to Table 2, the Plank is _____

From the above-named height to the Light Water Mark _____

From the Light Water Mark to the Wales _____

The Wales and Blackstrakes are _____ The Topsides _____

The Sheerstrakes _____ and Planksheers _____ The Waterways _____

The Decks _____ State of _____

The Shifts of the Planking are not less than _____ feet _____ inches. [*N.B.—If less than prescribed by the Rule, state whether general or partial, and if partial, in what part of the Ship.*]

The Planking is wrought _____ between:

PLANKING INSIDE.—The Limber-strakes are _____ the Bilge Planks _____

The Ceiling, Lower Hold, _____ Between Decks, Shelf Pieces _____

Clamps _____

FASTENINGS.—To Hold Beams _____

Deck Beams _____

Number of Breasthooks _____ Pointers _____ Crutches _____

Butts End Bolts are of _____ in the Bottom, and _____ Bolt in each Butt End through and clenched.

Bilge and Limber Strakes _____ bolted through and clenched. Treenails of _____ How made _____ General Quality of Workmanship _____

We certify that the preceding is a correct description of the above-named Vessel.

Builder's Signature _____

Surveyor's Signature _____

Her Masts, Yards, &c. are in _____ condition, and sufficient in size and length.

She has SAILS.

CABLES, &c.

ANCHORS,

No.

		Fathoms. Inches.		and their Weights.	
				No.	Weight.
Fore Sails,	Chain				
Fore Top Sails,	Hempen Stream Cable			Bower	
Fore Topmast Stay Sails,	Hawser			Stream	
Main Sails,	Towlines.....			Kedge.....	
Main Top Sails,	Warp				
and	All of quality.				

Her Standing and Running Rigging _____ sufficient in size and _____ in quality.

She has _____ Long Boat and _____ The present state of the Windlass is _____

Capstan _____ Rudder _____ Pumps _____

General Remarks.—Statement and Date of Repairs.

If Sheathed, Doubled, Felted, or Coppered _____ When last done _____

I am of opinion this Vessel should be classed _____

The Amount of the Fee£ : : is received by me,

Special£ : :

Certificate (if required) £ : :

Committee's Minute _____ 185—

Character assigned _____

No. 5.

IRON SHIPS.

No — Survey held at — Date — 185— on the — Master —
 Tonnage—Gross — Engine Room — Register — Built at —
 When built — By whom built — Owners — Port belonging to —
 Destined Voyage — If Surveyed Afloat or in Dry Dock —

Length aloft Feet. Inches. Horse, No.
 Extreme Breadth
 Depth from Beam to top of Floor..... Power of Engines

	Feet.	Inches.	Sketch, when necessary		Inches. 8ths.	Sketch, when necessary.
Distance between Floors amidships				Stem, if bar iron, moulding and thickness		
" " " forward and aft				" if plate iron, breadth and thickness		
" " Ribs amidships.....				Stern-post, if bar iron, moulding and thickness		
" " " forward and aft..				" if plate iron, breadth and thickness		
Floors, Size of Angle Iron, and No. at bottom of Floor plate	In.	In.	8ths.	Keel, if bar iron, depth and thickness.....		
" depth and thickness of Plate at mid line.....				" if plate iron, breadth and thickness		
Do. at turn of bilge				Garboard Plates, thick-ness.....	Description of Iron.	
Size of Reversed Angle Iron, and No. at top of Floor Plate...				" to bilge "		
Ribs, Size of Angle Iron, single or double				Bilge "		
" Reversed Iron, if to every frame or every frame...				" to Wales "		
Beams, Deck (No.) double or single				Wales "		
Angle Iron				Topsides "		
" depth and thickness of Plate amidships				Sheer-strakes "		
" double or single Angle Iron, on lower edge				Planksheers.....	Material.	
" average space between.....				Gunwale Plate or Stringer.....		
" if wood (No.) sided and moulded.....				Waterway.....		
Hold, (No.) double or single				Deck.....		
Angle Iron				Ceiling in flat		
" depth and thickness of Plate amidships				Bilge Planks inside.....		
" double or single Angle Iron, on lower edge.....				Ceiling from Bilge to Clamps.....		
" average space between.....				Hold Beam Clamps ...		
" if wood (No.) sided and moulded.....				" " Shelf		
Paddle, wood, sided and moulded or if Iron, size of Plate				" " Stringers...		
Engine " " "				Ceiling between Decks		
Keelson, wood, sided and moulded, iron size of plate, if Box, give sketch and dimensions.....				Stringers " "		
Side or Bilge				Deck Beam Clamps ...		
Number				" " Shelf		
				Stringers in Hold		
				Deck, Lower		

Transoms, material ——— or, if none, in what manner compensated for.

Knight-heads „ }
Hawse Timbers „ } are they free from defects?

The Ribs extend in one length from ——— to ——— rivetted through plates with — in. rivets, about ——— apart.

The reverse angle irons on the floors extend in one length across the middle line from — to —
 " " on the ribs " " " from — to —

Keelson, if wood, length of scarp ——— if iron, how are the various lengths connected?

Plates, Garboard, double or single rivetted to keel, with rivets — ins. diameter, averaging
— in. from centre to centre of rivet.

edges from Garboards to turn of bilge, worked carvel with a lining piece — in. thick, or clencher, double or single rivetted; rivets — in. diameter, averaging — ins. from centre to centre of rivets.

„ butts from Garboards to turn of bilge, worked carvel with a lining piece ——— thick, double or single rivetted; rivets — in. diameter, averaging — ins. from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?

edges from bilge to wales, worked carvel with a lining piece ——— thick, or clencher, double or single rivetted; rivets — in. diameter, averaging — ins. from centre to centre of rivets.

butts from bilge to wales, worked carvel with a lining piece — thick, double or single rivetted; rivets — in. diameter, averaging — in. from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?

edges to wales and to planksheers, worked carvel with a lining piece ——— thick, or clencher, double or single rivetted; rivets — in. diameter, averaging — ins. from centre to centre of rivets.

Planksheer, how secured to the plating of the sides { Explain by a sketch, }
 Waterway " " planksheer and to the beams { if necessary. }
 Side trussing ——— breadth and thickness of plates ——— how secured ———

Side trussing _____ breadth and thickness of plates _____ how secured _____
Deck trussing _____ " " " " " " _____

Deck Beams, how secured to the side ———

Hold	33	33	33	_____
------	----	----	----	-------

Paddle	"	"	"	_____
--------	---	---	---	-------

No. of breasthooks ——— crutches ———

What description of iron is used for the angle iron and bar iron in the vessel?

Builder's

————— *Builder's Signature.*

WORKMANSHIP.—Are the lands or laps of the clench work in all cases sufficiently wide to take the rivets and support the strain on them?

Do the edges of the carvel work and of the butts lay close together throughout their length, without requiring any making good of deficiencies?

Do the fillings between the ribs and plates fill in all solid with sliver pieces, or are they in short lengths?

Do the holes for rivetting plate to lining piece, or plate to plate, &c., answer well to each other? ——— and are the rivet holes well and sufficiently counter sunk in the outer plate?

Are there any rivets which either break into or have been put through the seams or butts of the plating?

Was the plating caulked internally in the wake of the frames or ribs?

Her Masts, Yards, &c., are in ——— condition, and sufficient in size and length.

She has SAILS.		CABLES, &c.		ANCHORS, and their weights.	
No.		Fa thoms		Inches.	No.
	Fore Sails,		Chain		Bower,
	Fore Top Sails,		Hempen Stream Cable		Stream,
	Fore Topmast Stay Sails,		Hawser		Kedge,
	Main Sails,		Towlines		
	Main Top Sails		Warp		
	and		All of ——— quality.		

Her Standing and Running Rigging ——— sufficient in size, and ——— in quality

She has ——— Long Boat and ———

The present state of the Windlass is ——— Capstan ——— and Rudder ———
Pumps ———

GENERAL REMARKS.

Statement and date of repairs; extent of corrosion (if any) both internally and externally; and condition of rivets.

In what manner are the surfaces preserved from oxidation?

I am of opinion this vessel should be classed ———

The amount of the Fee .. £ : : is received by me,

Special £ : :

Certificate (if required) £ : :

Committee's Minute ——— 185—

Character assigned ———

No. 6.

FORM OF REPORT OF ANNUAL SURVEY.

No. — Survey held at — Date — 18 — on the —
 Master — Tonnage — Built at — When built — By whom
 built — Owners — Port belonging to — Destined
 Voyage — If Surveyed Afloat or in Dry Dock —

Last Survey, No. — Port of — Classed —

The present condition of the

Decks	Plank (Bottom) & Counter.	Copper
Waterways	Treenails.....	Windlass and Capstan
Comings	Breasthooks and Stemson...	Pumps.....
Upper Deck Beams and	Transoms, Pointers, and	Boats
Fastenings	Crutches	Masts, Yards, &c.
Lower Deck Beams and	Timbers of the Frame	Sails.....
Fastenings	Kelsons	Anchor, No. of.....
Planksheers	Clamps and Shelves.....	Cables
Sheerstrakes	Ceiling.....	Hawsers and Warps
Topsides	Rudder	Standing & Running Rigging
Wales		

General Observations and Opinion,

Committee's Minute — 18 —

Character assigned —

Certificate (if required)

No. 7.

FORM OF CERTIFICATE OF CHARACTER.

Lloyd's Register of British and Foreign Shipping.

ESTABLISHED 1834.



No. —

London,

18

OFFICE, No. 2, White Lion Court, Cornhill.

These are to Certify, That the — of —
 — Master, — Tons, bound to —, has been
 Surveyed by the Surveyors to this Society, and reported to be, on the —

— her intended Voyage, and that she has been **CLASSED** in the **REGISTER**
BOOK of this Society on the List of Ships of the —

Charge s.

Witness my Hand,

—, Secretary.

Chairman.

FORM OF CERTIFICATE FOR VESSELS NAVIGATED BY STEAM.

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

Certificate for Vessels navigated by Steam.

_____ Day of _____, 18

_____ do certify that the whole of the Boilers and machinery of the
 Steam Vessel _____ belonging to _____, whereof _____
 is Master, _____ Tons, have been carefully inspected and examined by _____
 at _____, and that _____ find the same to be at this time in good
 order and safe working condition.

Witness _____

Manufacturing Engineer.

The following is a true Account of the Particulars of the machinery of the
 Steam Vessel _____ above named:

ENGINES.

Number
 Diameter of Cylinder
 Length of Stroke
 No. per Minute
 Estimated Power
 Diameter of Paddle-wheels
 Length of Paddles
 Breadth of Paddles
 No. of Paddles
 On what motion
 No. of revolutions per minute ..
 Size of the holding-down bolts ..
 Condition of ditto
 Maker of the Engines
 Age of the Engines
 When they were last taken out
 Present condition of the Engines
 Can injection water be taken
 from the Bilge in the event of
 a serious Leak

FUEL.

Where stowed
 If in contact with boiler
 If not, what space between Coal
 Boxes and Boiler
 For what quantity room is pro-
 vided
 If liable to get wetted.....

BOILERS.

Whether iron or copper
 Working pressure
 If it can be increased without
 going into the Boiler
 What are the means of changing
 the water while the Boilers are
 at work

Maker of the Boilers
 Age of the Boilers
 When they were last taken out
 Present condition

Number of feed pumps
 How attached.....

What clear space upon the top-
 side of the boiler from wood-
 work

Do. at the end from ditto.....
 Do. round the chimney from do

PUMPS.

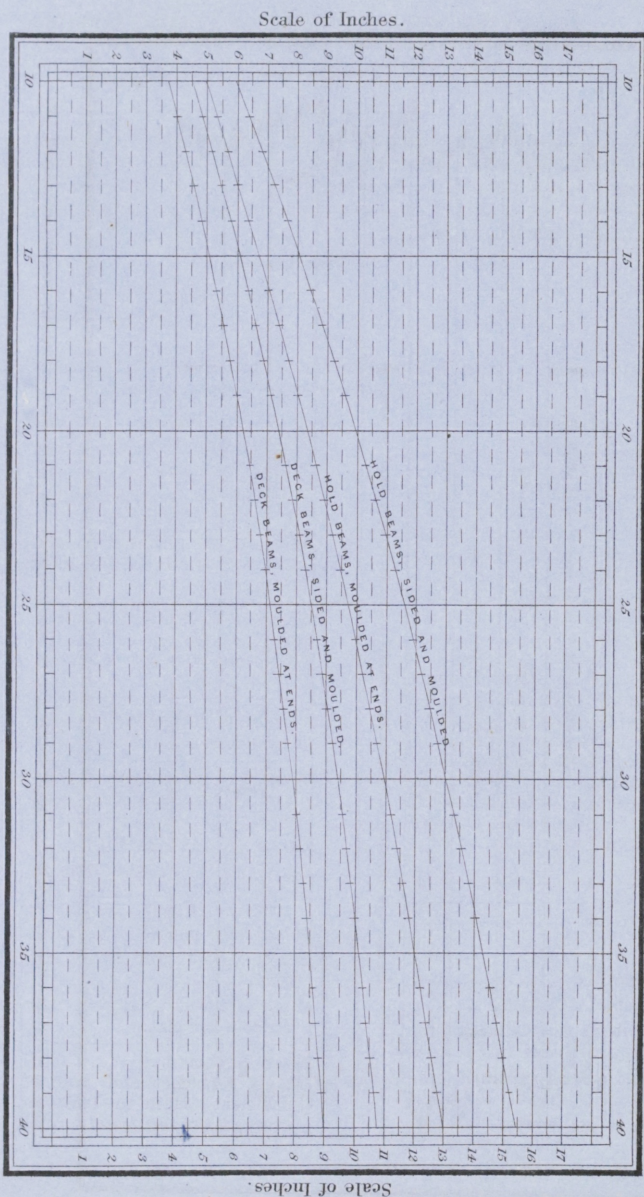
No. of hand pumps
 Can they be worked by the En-
 gine
 If any attached to engine, their
 purpose and size.....

No. of force-pumps
 No. of branches and hose of
 sufficient length to reach to
 every part of the vessel.....

Manufacturing Engineer.

LENGTH OF BEAMS IN FEET, AMIDSHIPS.

Plate

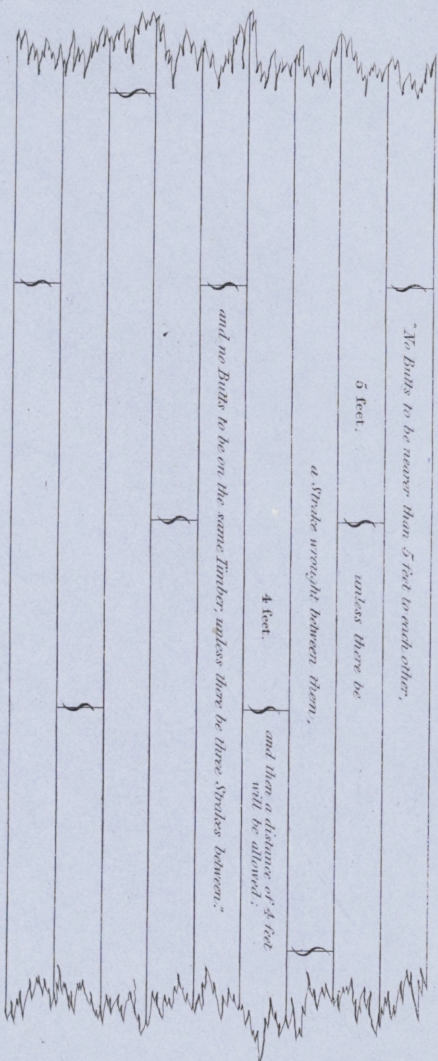


B. The size of the MIDDLE DECK BEAMS, and of ORLOP BEAMS, to be the mean of the sizes prescribed above.



LENGTH OF BEAMS IN FEET AND INCHES

IN THE CASE OF BEAMS, THE BEAMS SHOULD BE PLACED IN THE MIDDLE OF THE BEAMS



The Sketch shows the principle on which the Butts should be arranged, so as to avoid Stepping, which is deemed bad Workmanship.

